

R-FALCON HD

USER MANUAL



SHARE YOUR VISION

Thank you for choosing a PNJ product. This manual describes how to prepare and use your product. It's also providing information about the utilization and safety precautions, the regulations, compliance and technical specifications of the device. Please read completely, carefully and regularly before use, become familiar with all the feature of the device and ensure safety use of your drone to enjoy fully with it. Keep this manual for future use. The manual is also available on our website www.pnj.fr under the heading «User manuals».

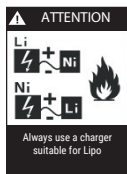
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BATERRIE LI-PO

- By holding, charging or using the LiPo battery, you assume all risks related with the use of lithium batteries.
 - Always keeps the device out of the reach of children.
 - Never leave the battery unattended while charging.
 - Never leave the battery charging more than 1 hour.
 - Use only the USB charger provided in the pack. Never use a Ni-Cd or Ni-Mh charger.
 - Before charging the battery, check that it is not damaged. Check that the battery has not inflated or that the battery compartment is not punctured. If you notice any of these situations: DON'T CHARGE THE BATTERY !
 - A used battery should be removed from the device and replaced.
 - If you notice that the battery starts to inflate during the charging, disconnect the battery immediately and never use it again. The continued use of an inflated or damaged battery may cause an explosion.
 - Always ensure that the output voltage of the charger matches with the battery voltage. Do not charge at a higher voltage than recommended. Only use the charger supplied in the pack.
 - Disconnect the battery from the charger if it becomes too hot (never exceed 49°C / 120°F) or inflates. if the battery becomes hot, disconnect the charger immediately.
- batterie devient chaude, déconnecter le chargeur immédiatement.
- Only charge on a non-afflamable surface. Do not charge inside a vehicle

- Do not exposed the battery to a heat source or high temperature.
- Do not put the battery in contact with water or immersed in any other liquids.
- Improper use of the battery may cause fires, explosions or others danger.
- In case of fire caused by the battery, do not use water to extinguish the fire (sand recommended).
- Do not carry batteries without packaging in your pocket or bag, because the shock of the batteries against each other could cause a short circuit.
- keep the battery in a dry place at room temperature



ATTENTION / WARNING / WAARSCHUWING

FR Veuillez le lire le "User Manual" entièrement et attentivement avant toute utilisation
 Le manuel mis à jour est disponible sur le site www.pnj.fr/modes-demploi/
 ATTENTION: Toutes les précautions d'utilisation concernant les batteries LiPo doivent être suivies rigoureusement. Une mauvaise manipulation de la batterie peut provoquer un incendie, une explosion, des blessures personnelles ou des dégâts matériels.

EN Please read the operation manual carefully before using the product
 The english User Manual can be downloaded on our website: www.pnj.fr/modes-demploi/
 WARNING : Lipo batteries are dangerous, please follow the instructions to avoid injuries or damages

NL Lees de instructies in de bedieningshandleiding zorgvuldig door voordat u onze producten gebruikt
 De bedieningshandleiding kunt u downloaden vanaf onze website: www.pnj.fr/modes-demploi/
 WAARSCHUWING : LiPo batterijen zijn gevaarlijk, het niet opvolgen van de gebruikshandleiding kan blessures en schaden veroorzaken.

PRÉCAUTIONS D'UTILISATION

When using your drone, please respect the following precautions:

- Using the drone indoor is recommended and outdoor if there is light wind.
- Not suitable for children under 14 years old.
- Minors (under 18 years old) must fly under adult supervision.
- Warning: Risk of ingestion of small parts, prohibited for children under 3 years old.
- Never use the device near children or animals.
- Be sure to use this product carefully and responsibly to avoid all kind of injury and/or material damage.
- Make sure that the use of the device is accordance with the legal disposal of the country where you are located.
- Find out about the restrictions for using the Wi-Fi frequencies of where you fly.
- Check the weather conditions before use. Do not fly in rainy weather, fog, windy or in snow.
- Avoid all contact with the following elements: sand, dust, water, liquid substance, sun, heat. Otherwise, it could cause irreversible damage.
- Not suitable for people with epilepsy, unless otherwise medically prescribed.
- Avoid to fly excessively (risk of eye or physical fatigue).
- Respect the safety instructions in this manual.
- Only use accessories provided by PNJ.
- Before each flight, check that the batteries are fully charged.

AVERTISSEMENT

The law required to use this drone in prudent and responsible manners to avoid all human or material damage. In case for unauthorized use or for illicit purposes, you will be fully responsible for any damage causes. Be sure to respect laws, without violating the privacy of other people. PNJ assumes no responsibility in case of damage resulting directly or indirectly from the use of this device, any parts of this device or the manual. PNJ is not responsible for any accident, injury, death, loss or other claim of any kind related or resulting the use of this product. All the tele pilot must respect the regulations of international organizations such as ICAO (International Civil Aviation Organization) and the regulations of their own national airspace. For more information about the regulations in France, please take a look at the following websites:

DGAC - www.developpement-durable.gouv.fr

PNJ - www.pnj.fr

DOWNLOAD THE APP

Please scan the QR code on the packaging or here below to access in our website and download the App. You can also search for "R-Falcon HD" in Google Play Store or Apple App Store for downloading the App to control the drone.



R-Falcon HD

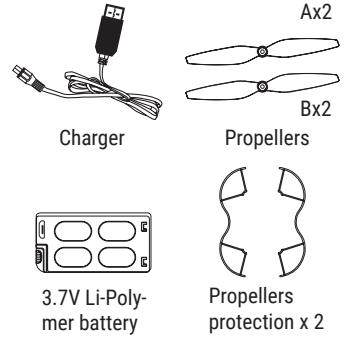
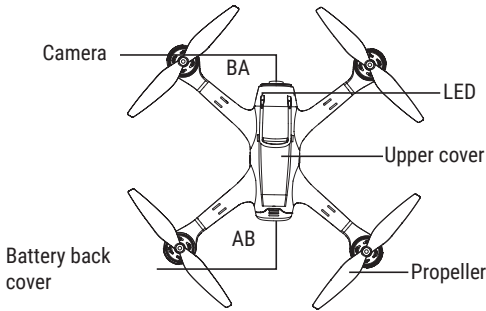
FLIGHT ENVIRONMENT

1. Outdoor flight (recommended): Fly in average temperature, in sunny weather and windless (max 4).
2. Indoor flight (not recommended): Choose a spacious place, without obstacles or people or animals.

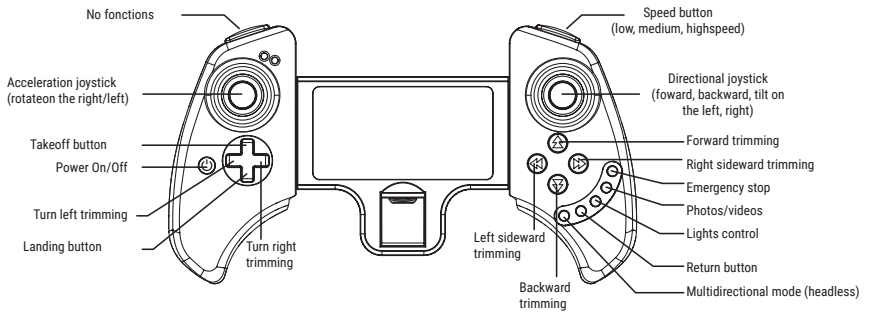
Note:

- Do not fly in extreme temperatures (very cold or very hot), otherwise it could effect on the flight performance of the drone.
- Do not fly in windy weather, the flight performances and the device control may altered due to the wind. This might take away or damage the device.
- Avoid the rain, water could damage the drone and the electrical circuits.

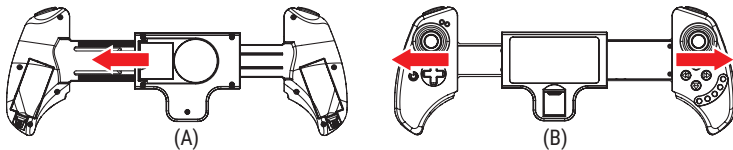
DRONE PARTS NAME



REMOTE PARTS NAME

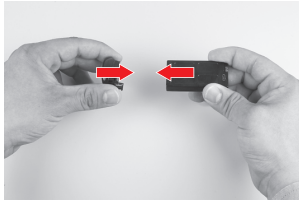


1. The remote control can be adjusted for phones or tablets of different sizes. (Figure A, B)

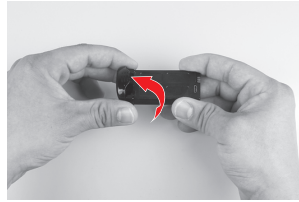


2. Pull on the lock extension button, on the back of the remote control (figure A) then adjust the remote control (figure B). The controller can easily adapt for small tablets.

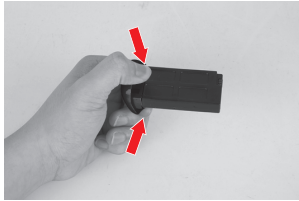
HOW TO INSTALL AND CHARGE BATTERY



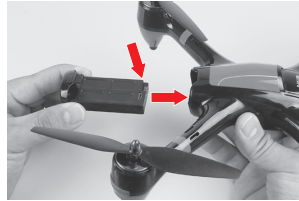
(L)



(M)

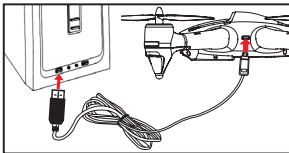


(N)

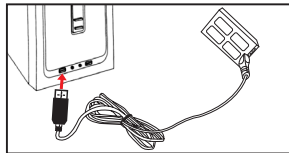


(O)

1. Put the battery in his cover and make sure that the connections are correct. (Figure L)
2. Insert the battery in his cover. (Figure M)
3. Press on the top and bottom cover to jam the battery. (Figure N)
4. Insert the battery and his cover into the back of the drone in the battery placement. (Figure O)
Warning : Make sure that the connection port is facing up (Figure O).



Charging via the drone



Charging the battery directly

WARNING !
Do not charge the battery unattended

1. Connect the Li-Po battery or the charging port of the drone to a computer with the USB cable.
2. The LED light of the USB will stay on while charging and turn off when the charging is completed.
The charging takes about 120 minutes.

BATTERY WARNING

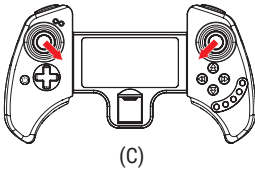
1. Make sure that the voltage of the USB charger fits the local electricity supply.
2. The charging plug will overheat if overcharged. In this case unplug the battery immediately to avoid accident.
3. Do not charge the battery unattended.
4. Do not use others charger other than the one supplied with the drone.
5. Wait 30 minutes after the fly in other to let the battery cool down before recharging it.
6. Do not leave the battery in the fire, sunlight or in environment too hot.
7. Do not short circuit the battery.
8. Keep the battery away from metal parts or magnets.

PRECAUTIONS FOR USER

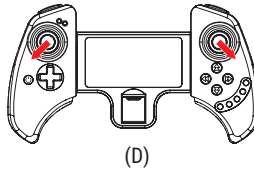
While using your drone, be sure to respects the following precautions:

1. Place the drone on a flat ground, and hold the drone button On/Off, the drone light will flash slowly.
2. Open the controller switch. It will make an alert sound while searching for the frequency, and a red indicator light on the controller flashes slowly. Once the connection is successful, a green indicator light will appear on the controller and the drone will stay on.
3. Please operate as below after connecting the drone and the controller.
 - Re-calibrate the gyroscope : Start by pulling the two joysticks inward diagonally together (Figure C), the lights flash several times and then stay on;
 - Unlock the drone by pulling the two joysticks outward diagonally together (Figure D). The propellers rotate slowly now.
 - Press the acceleration joystick to fly the drone normally.

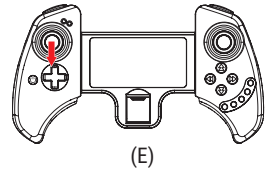
Note: If the drone power wire is disconnected, you will have to pair the controller again. The drone communicates on a 2.4 GHz frequency and can be operated in long distance.
4. Multidirectional mode (headless): when you activate the multidirectional mode (headless) the drone will take your orientation as a reference. In this case, if you order the drone to turn right, it will turn in your right direction, whatever the direction of its flight at the moment of the instruction.
5. One-key return: By pressing the automatic return button, you order the drone to fly back at it starting position.
Push the left joystick forward or push the return button again to stop the order.
6. The drone is equipped with an altitude hold system and stabilized at his altitude. Pushing the throttle too fast would cause slow response of air pressure detection and drone jumps. In this case, slowly reduce the speed.
7. For landing, pull the left throttle in minimum until the drone lands. When the propellers are totally stopped, loose the joystick.
8. In case of collision while flying or loss control of the drone: use the emergency stop button.
9. When the battery is low, the drone's lights will flash quickly: land and recharge the battery.



(C)



(D)



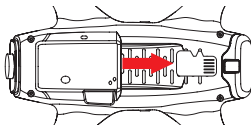
(E)

VOICE CONTROL

You have the possibility to control the drone with the 4 following injunctions in English

- "Forward" : go forward
- "Backward" :go backward
- "Left" : turn left
- "Right" -turn right

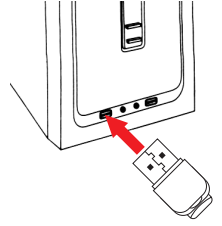
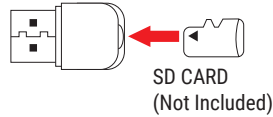
HOW TO INSTALL SD CARD



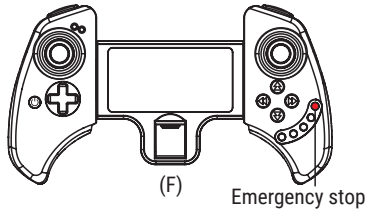
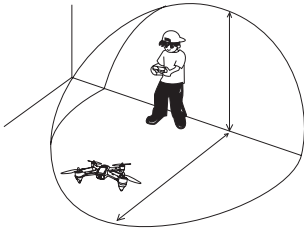
1. Remove the SD card from the bottom of the drone (Figure 3).
2. Insert the SD card into the card reader (Figure 4).
3. Insert the card reader into the computer USB port (Figure 5), the sequence is as follow :
My computer → Removable disk → Video or image Folders

HOW TO DOWNLOAD FROM SD CARD

1. Remove the SD card from the bottom of the drone (Figure 3).
 2. Insert the SD card into the card reader (Figure 4).
 3. Insert the card reader into the computer USB port (Figure 5), the sequence is as follow :
- My computer → Removable disk → Video or image Folders



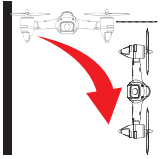
EMERGENCY STOP



Warning

In case of collision or loss control, you must immediately stop the drone engines. You can press the emergency stop button as indicated on the graphic (Figure F)

AUTOMATIC STOP

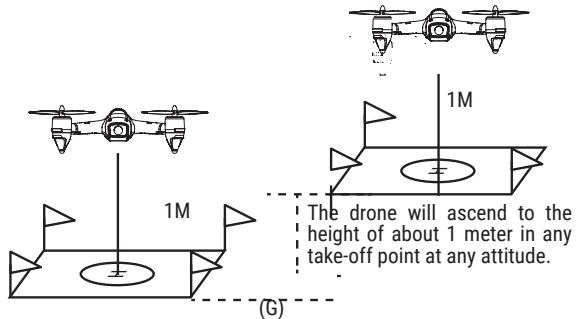
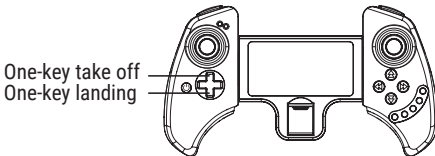


If the drone crashes in a vertical position, it will automatically turn off the power to protect the propellers blades.

in this case, to regain control of the drone:

- Hold the left joystick backward to reset the controller (Figure E)
- Then pull down the two joystick outward (Figure D) for unlock the drone to make it fly normally

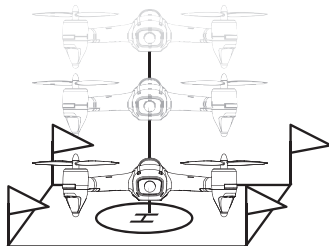
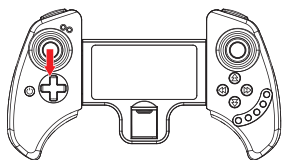
AUTOMATIC TAKE OFF



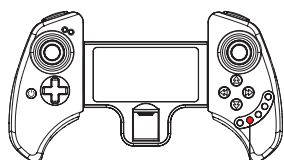
1. After that the one-key take off has been pressed, the drone will ascend automatically to the height of about 1 meter.
2. After that the one-key landing has been pressed, the drone will automatically descend to the vertical of his position for 3-5 second.

Warning: You can always operate the drone during the take off and the landing.

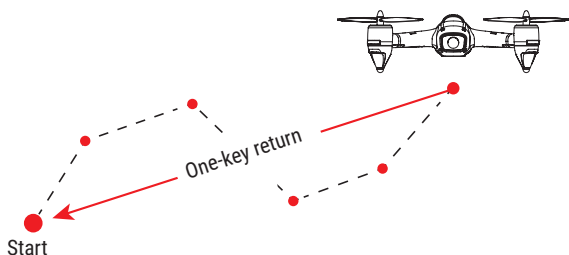
MANUAL LANDING



RETURN HOME FUNCTION



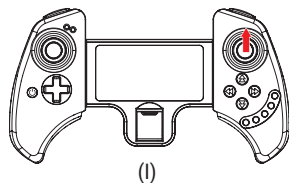
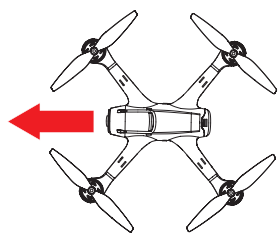
Return button



The drone will return automatically to the controller when the return button has been pressed. The front lights of the drone will stay on, but the back lights will flash quickly until the drone landed.

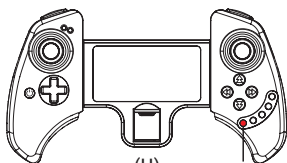
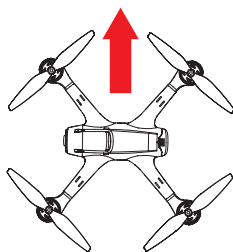
HEADLESS MODE FUNCTION

Without multidirectional mode

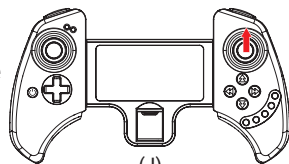


(I)

With multidirectional mode



(H) Headless mode
Multidirectional mode

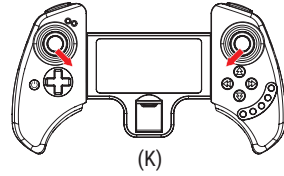
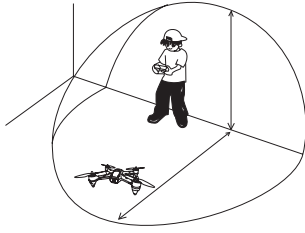


(J)

Without the multidirectional mode, you must permanently worry about the drone flight direction when you direct the drone (Figure I).

Press the headless mode button for activate the multidirectional mode (Figure H).

This mode allows to control the drone without worrying its flight direction. If you press the right joystick forward, the drone will move away from you whatever its flight direction at the moment of the command (Figure J).



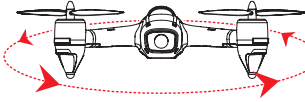
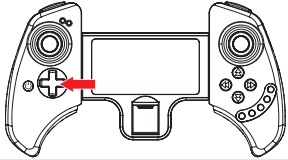
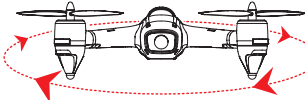
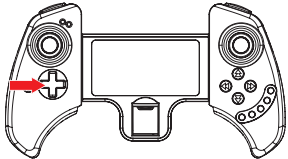
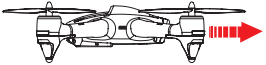
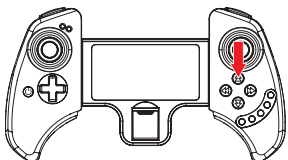
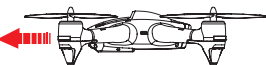
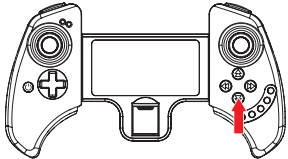
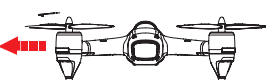
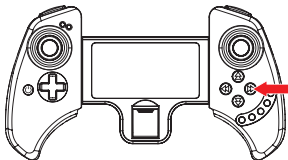
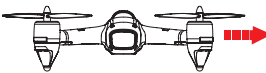
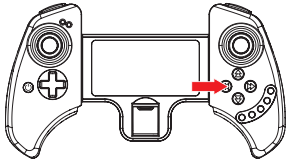
! Warning: If a collision occurs, it is possible that the multidirectional mode doesn't work correctly. In this case, put the drone immediately on the ground and reset the gyroscope by pulling down both joysticks inward. (Figure K)

CONTROL OF THE DRONE

<p>Ascending ↑</p> <p>Descending ↓</p>	<p>ELEVATION (gas) Left joystick - Push upward to ascend - Push downward to descend Always manipulate gently the elevation joystick</p>	
<p>Turn left</p> <p>Turn right</p>	<p>ROTATION (lace) Left joystick - Push to the left to turn left - Push to the right to turn right</p>	
<p>Forward ↑</p> <p>Backward ↓</p>	<p>LONGITUDINAL INCLINATION (pitch) Right joystick - Push upward to fly forward - Push downward to fly backward Always manipulate gently the pitch joystick.</p>	
<p>Left side-ward fly ←</p> <p>Right side-ward fly →</p>	<p>LATERAL INCLINATION (roll) Right joystick - Push left to fly sideward to the left - Push right to fly sideward to the right</p>	

If the drone is rotating in the air uncontrollably, adjust the rubber trimming buttons until the drone is stable.

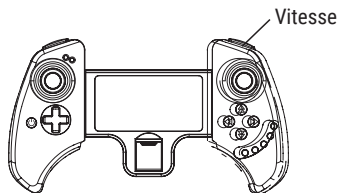
CONTROL OF THE DRONE

	<p>If the drone spins on itself to the left : Push the trim A left/ right to the right.</p>	
	<p>If the drone spins on itself to the right : Push the trim A left/right to the left.</p>	
	<p>If the drone moves backward, push the shift trim C forward/ backward, forward.</p>	
	<p>If the drone moves forward, push the shift trim C forward/ backward, backward.</p>	
	<p>If the drone moves sideward to the left, push the shift trim B left/right to the right.</p>	
	<p>If the drone moves sideward to the right, push the shift trim B left/right to the left.</p>	

FLIGHT ADJUSTMENT

The drone has three movement speeds :

- When you turn on the drone for the first time, it is configured to low speed (40%)
- Press once on the speed button to change to medium speed (70%). You will hear 2 sounds <<bip bip>>.
- Press again on the speed button to change to high speed (100%). You will hear 3 sounds <<bip bip bip>>.
- Repress the speed button, to return to low speed (40%). you will hear one sound <<bip>>.

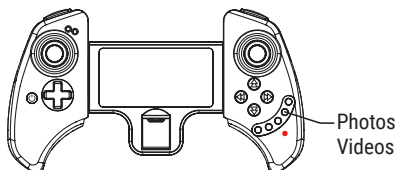


To learn how to fly, we suggest you to stay at low speed and increase it progressively during the trainings.

PHOTO AND VIDEO

Photos and videos are saved on the Micro SD card. To retrieve them, you must remove the Micro SD card (not included) from the drone (press on it to extract) and insert into a SD card reader (not included).

You can then connect the Micro SD card reader to a computer to access your files.



Make sure that you have install the Micro SD card in the drone.

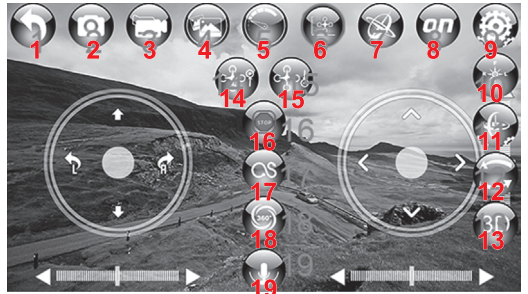
2. Press the photos/videos button from the controller to take a photo.
3. Hold the photos/videos button from the controller to record a video.



APPLICATION INTERFACE

CONNECTING THE PHONE TO THE DRONE - connect your smartphone to the drone's wifi
Wifi Name : R-Falcon HD_XXXXXX
Password : 1234567890

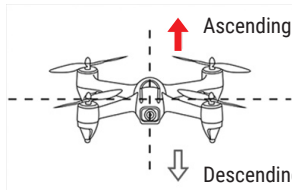
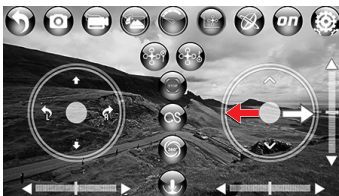
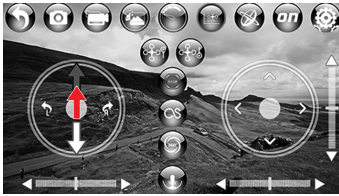
1. Return
2. Take a photo: press this button to take a photo.
The icon turns red for 1s.
3. Recording and stopping video on a Micro SD card:
Press on this button to record a video directly in the SD card, then repress to stop. The recording time is scrolled and the icon turns red during the recording.
4. Photos and videos playback: Enter the gallery to view the photos and videos recorded in the application (all default photos and recorded videos by pressing the button 4). You can click on the 3D icon to split the screen in two and watch the photo/video in a VR mask.
5. Changing speed: press this button to change the fly speed (3 different speed, low, medium, high). The icon indicates the speed level.
6. Altitude hold
7. Gravity sensor mode: Cf paragraph << Control for the drone>> page 11.
8. Show/ hide control interface
9. Show/ hide setup menu
10. Headless mode
11. Gyro Calibrate
12. Camera inversion: allows to reverse the screen direction. The icon turns red when the inversion is effective.
13. VR mode - immersion control: click on this button to split the screen in two, in order to have two similar screens and be able to insert your smartphone inside the VR mask (optional).
14. One-key unlock/ take-off
15. One-key landing
16. Emergency stop button
17. Flight path: allow to program a flight path for the drone intuitively
18. No function
19. Voice control: allow to control the drone by voice orders (orders in English)



FLY WITH JOYSTICK

Photos and videos are saved on the Micro SD card. To retrieve them, you must remove the Micro SD card (not included) from the drone (press on it to extract) and insert into a SD card reader (not included).

You can then connect the Micro SD card reader to a computer to access your files.



ELEVATION (gas)

Left joystick

- Push upward to ascend
- Push downward to descend

Always manipulate gently the elevation joystick

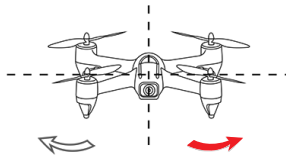


LONGITUDINAL INCLINATION (pitch)

Right joystick

- Push upward to fly forward
- Push downward to fly backward

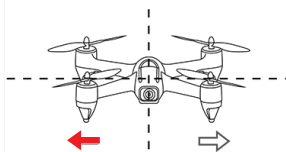
Always manipulate gently the pitch joystick.



ROTATION (lace)

Left joystick

- Push to the left to turn left
- Push to the right to turn right



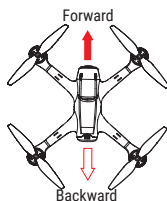
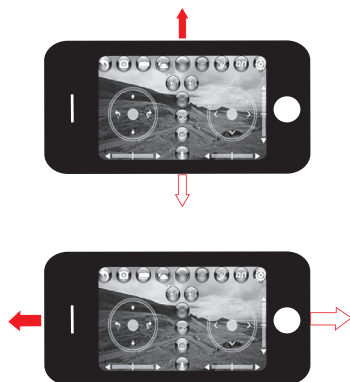
LATERAL INCLINATION (roll)

Right joystick

- Push left to fly sideward to the left
- Push right to fly sideward to the right

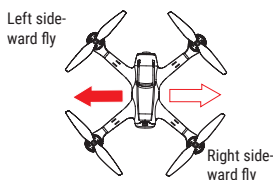
FLY WITH GYROSCOPIC

Make sure that the n°10 icon is red (selected). When the tilt control is activated (icon n°7 in red), the right joystick switch automatically to tilt control of the smartphone. You have to control the left joystick with one hand and tilt your smartphone depending on the inclination that you want for the drone.



LONGITUDINAL INCLINATION (pitch)

- By the smartphone's inclination
- Tilt forward to move forward
 - Tilt backward to move backward



LATERAL INCLINATION (roll)

- By the smartphone's inclination
- Tilt to the left to go left
 - Tilt to the right to go right

MAINTENANCE

- The battery should be stored in a dry and ventilated area. The storage temperature range is between 18°C and 25°. Avoid to charge and uncharged excessively to extend its life. Ensure to charge it before storing it, if it won't be use for a long period.
- If the radio control won't be use for a long period, be sure to remove the batteries from the bottom compartment. Battery leakage may damage the radio control and may cause a fire. Once used, ensure to throw the batteries according the legal regulations in order to preserve the environment.
- To avoid any problems, we strongly advise you to have the habit to remove the drone battery when you are not using it.
- Make sure to store your materials in a dry place, away from water and the heat. Do not put the drone on a damp surface or a proximity of liquid substances. This could cause irreversible damage.
- The maintenance can only be carried out by the After-sell Service from the shop or from the distributor. If you find a problem with your drone, be sure to call them directly. It's not recommended to change by yourself the engine or the motherboard for example, because its requires technical knowledge.
- Use only the accessories specified by the manufacturer.
- Find out all our products and accessories in our website www.pnj.fr

GUARANTEE

This product is guaranteed for a period of 24 months from the date of the original purchase date by the consumer, except for certain worn pieces* (cf below), against all manufacturing defects, upon presentation of the proof of purchase (receipt with date, place of purchase, product name).

During the contractual warranty, the defective product must be returned in its original packing to the retailer's service center or to the www.pnj.fr website, depending on the place of purchase. after inspection of the product, the retailer's

service will proceed for the reparation or the replacement of the part or of the defective product, excluding any other compensation, if the product has been used correctly.

The guarantee does not cover:

- the drone frame, the propellers, the propeller's protection, the landing gear, the buttons, the controllers and the radio control antenna, damaged or deteriorated from a fall or an accident, voluntary or involuntary
 - The battery charger in case of power outlet (voltage too high)
 - Products that have undergone unauthorized transformations, modifications, customizations or other assembly
 - Damage resulting from accident, normal wear and tear of the product, contact with a liquid (rain, water, etc.)
 - Defects due to alteration or deterioration of the product caused by a fall, accidental shock or immersion, voluntary or involuntary,
 - Defects due to abnormal use of the product, installation of spare parts not in accordance with the instructions stipulated in these operating instructions or on the website www.pnj.fr
 - Damages resulting from a repair performed by the user himself or an unauthorized third party, exchange of spare parts not provided by PNJ
 - Defects caused by parts not supplied by PNJ, including a battery not approved by PNJ
- Any product found to be defective after analysis will be returned to the shipper at its expense.

The spare parts required for the product utilization are available for 12 months from the date of first purchase of the product. Wear parts: Battery: 6 months / ESC: 6 months / Engines: 6 months

FRENCH LEGISLATION

Ensuring the safety of individuals and other aircraft, is your responsibility. If you use your drone in France, as part of leisure activities, we remind you that it is essential to respect the following 10 principles to fly in accordance with the law:

1. I do not fly over people
2. I respect the maximum flight heights
3. I never lose my sight of my drone and I do not use it at night
4. I do not fly my drone over public space in built-up areas
5. I do not use my drone near aerodromes
6. I do not fly over sensitive sites
7. I respect the privacy of others
8. I do not spread my footage without the agreement of the individuals concerned and I do not use it commercially
9. I verify under what conditions I am insured for the practice of this activity
10. In case of doubt, I inquire

Consult the guide on aeromodelism on the website of the Civil Aviation Directorate General for more information on the conditions for the use of recreational drones. For more information:

- <http://www.developpement-durable.gouv.fr/-Drones-aeronefs-telepilotes-.html>

The utilization of a drone under the conditions of use not complying with the rules enacted to ensure safety is punishable by one year of imprisonment and a fine of 75,000 euros under the Article L. 6232-4 of Transport code.

FLYING ASSOCIATION

Aeromodelling clubs are a privileged place to use flying models in the rules. They are reunited together in national federations, where you can find information about clubs near your home.

BELGIQUE	FRANCE	HOLLANDE
AAM Rue Montoyer, 1, boîte 1 1000 – Bruxelles	FFAM 108 rue Saint Maur 75011 PARIS Tél. 01 43 55 82 03	KNVvL Houttuinlaan 16A 3447 GM Wo- erden Tél. 0348-437060
http://www.aamodels.be/	http://www.ffam.asso.fr/	http://www.knvvl.nl/

RECYCLING



These symbols indicated that this product should not be eliminated at the end of his life with the other household waste. Selective collect of electrical and electronic waste. Electrical products should not be disposed of with household products. According to the European Directive 2012/19 /EC for the scrapping of electrical and electronic materials and its execution in national law, used electrical products must be collected separately and placed at collection points provided for this purpose. Contact your local authority or your dealer for recycling advice.

DECLARATION OF CONFORMITY



SAS PNJ, 110, Esplanade du Général de Gaulle 92400 Courbevoie, France, declares under its sole responsibility that the product described in this manual complies with the requirements of the Directives R&TTE 1999/5/CE et RoHS 2011/65/EU.

A copy of the Declaration of conformity is available in the following website:
www.pnj.fr/certifications

Date: 25/09/2018

Christian Pouthier, product manager SAS PNJ

TRADEMARKS

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