

Parrot
AR.Drone



Quick start guide

Parrot AR.Drone

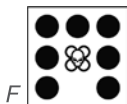
www.parrot.com



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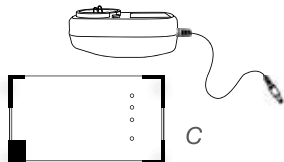
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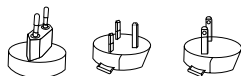
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Pictures are not contractual

A *Parrot AR.Drone & removable hull (indoor use)*

B *Hull with apertures (indoor use)*

C *Charger*

D *Battery*

E *Plug adapters*

F *Tag*

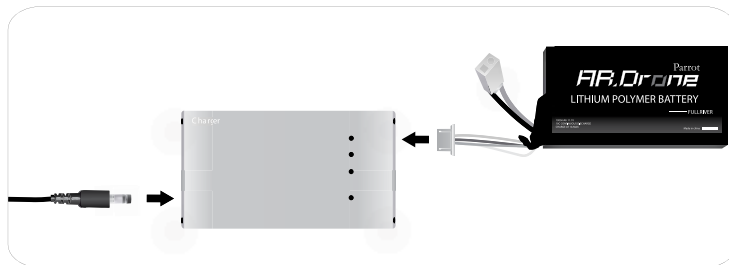
G *Stickers*

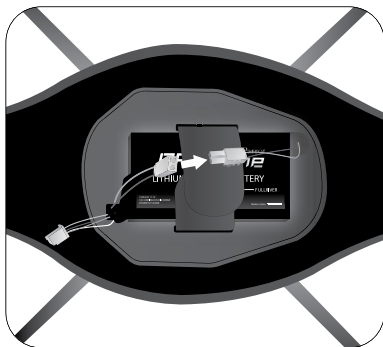


- Do not discard the AR.Drone packaging!
Without it, you will not be able to play
the included games.



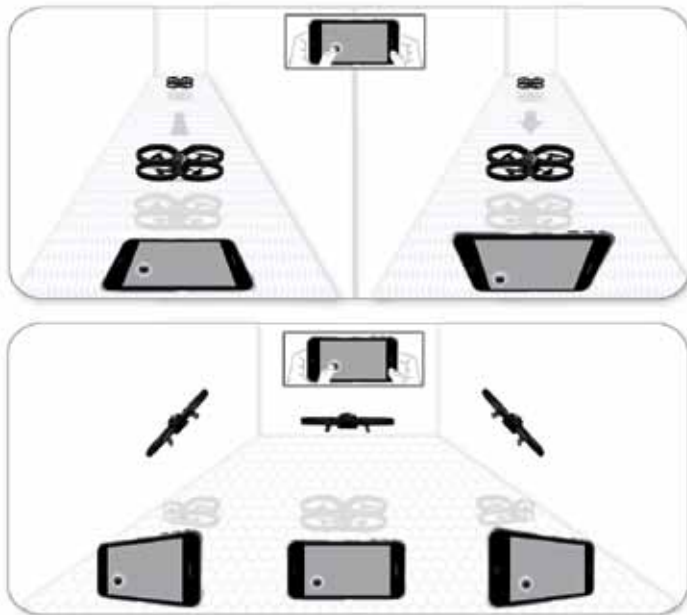
INSTALLATION DIAGRAMS

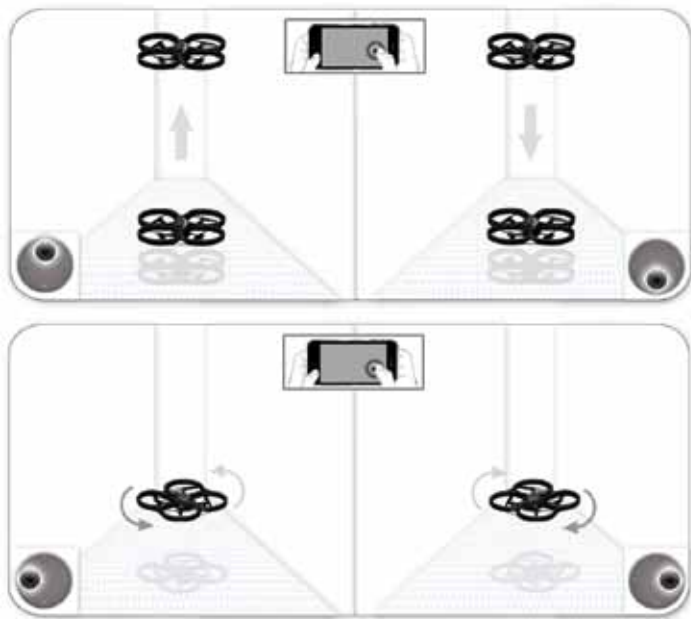




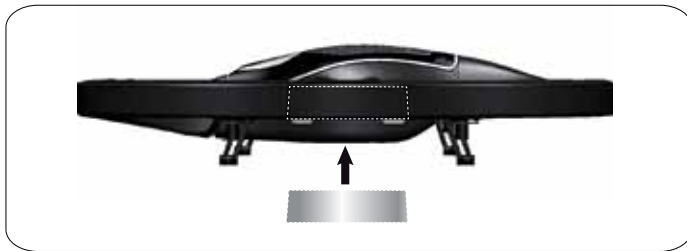
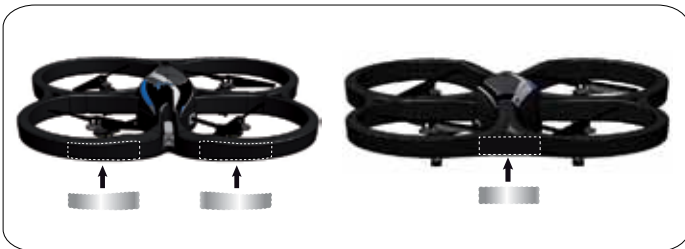


FLYING THE AR.DRONE





APPLYING THE STICKERS



Quick start guide

About this guide



In order to limit our paper consumption, and as part of our environmentally friendly and responsible approach, Parrot prefers to put user documents online rather than print them out.

This simplified guide to the AR.Drone is therefore limited to providing you with the main instructions that will make it easy for you to use the device. More information can be found on the Support and Downloads section of our website, www.parrot.com: the full manual, FAQs, tutorials, and more.

Warning - Packaging and stickers

- Do not discard neither the packaging ! Without it, you will not be able to play the included games.
- To play the multi-player game AR.Flying Ace, the stickers provided in the packaging must be stuck on the internal surface at the locations indicated by the small marks.

Extra batteries and spare parts

- In order to increase your AR.Drone playing time, you can purchase spare batteries from our website www.parrot.com. You can also use our website to order spare parts if needed.
- We also provide online video tutorials showing you how to replace parts. However, if you don't feel confident enough to replace any parts yourself, you can send us your AR.Drone using the returns procedure. See our website for more information.

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HEALTH AND SAFETY PRECAUTIONS

Important Safety Information – Read the following warning before you or your child play with the AR.Drone. Failing to do so may cause injury.

Seizure warning

- ▣ Some people (about 1 in 4000) may have seizures or blackouts triggered by light flashes or patterns, such as while watching TV or playing video games, even if they have never had a seizure before;
- ▣ Anyone who has had a seizure, loss of awareness, or other symptom linked to an epileptic condition should consult a doctor before playing a video game.
- ▣ Parents should watch when their children play video games. Stop playing and consult a doctor if you or your child have any of the following symptoms: convulsions, eye or muscle twitching, loss of awareness, altered vision, involuntary movements, disorientation.
- ▣ To reduce the likelihood of a seizure when playing video games:
 - Sit or stand as far from the screen as possible.
 - Play video games on the smallest available television screen.
 - Do not play if you are tired or need to sleep.
 - Play in a well-lit room (indoor) or area (outdoor).
 - Take an 10 to 15 minute break every hour.

Repetitive motion injuries and eyestrain

Playing video games can make your muscles, joint, skin or eyes hurt after a few hours. Follow these instructions to avoid problems such as tendinitis, carpal tunnel syndrome, skin irritation or eyestrain;

- avoid excessive play. It is recommended that parents monitor their children for appropriate play ;
- take a 10 to 15 minute break every hour, even if you don't think you need it;
- if your hands, wrists, arms or eyes become tired or sore while playing, stop and rest them for several hours before playing again ;
- if you continue to have some hands, wrists, arms or eyes during or after play, stop playing and see a doctor.

WARNING! Not suitable for children under the age of 8. This product contains small magnets. If swallowed, the magnets may stick together in the intestines and cause serious injury. Consult a doctor immediately if the magnets are swallowed.

Use and maintenance

- The Parrot AR.Drone is not suitable for use by children under 14 years of age.
- To fly the AR.Drone indoors install the hull in order to protect the AR.Drone in case of collision with any object.
- You should keep the Parrot AR.Drone in sight at all times when operating it, in order, among others, to avoid injuries or damages to people, animals or property.
- The use of the AR.Drone in some public areas (for instance train stations, trains, airports, aircrafts, etc.) may be prohibited. You should check whether the use of the Parrot AR.Drone is permitted before using it in public areas or public transport.
- Always use your Parrot AR.Drone bearing in mind other people's privacy. In particular, we recommend that you do not record people's image without their express consent.

- ❏ When rotating, the propellers of the Parrot AR.Drone could cause injury to people, animals and property. You should not touch the Parrot AR.Drone when propellers are rotating and should wait until the propellers have completely stopped before handling the Parrot AR.Drone.
- ❏ You should ensure that no-one is standing nearer than 1 meter (1 yard) from the Parrot AR.Drone when in operation and that at all times you keep a sufficient distance between the propellers and any person, animal or property.
- ❏ You must keep the Parrot AR.Drone away from high voltage power lines, trees, buildings and any other potentially dangerous or hazardous areas.
- ❏ The Parrot AR.Drone's performance may be affected or significantly reduced and your Parrot AR.Drone irreversibly damaged if:
 - you use the Parrot AR.Drone in unfavourable meteorological conditions (including but not limited to rain, wind, snow, fog, etc) or if visual conditions are not sufficient (e.g. operation of the Parrot AR.Drone by night);
 - you use the Parrot AR.Drone in wet conditions (e.g. you should not land the Parrot AR.Drone on water or on a wet surface);
 - you allow sand or dust to penetrate the Parrot AR.Drone;

- you obstruct the engine's air vents;
- you use spare parts and accessories other than those specified by Parrot, or
- you use the Parrot AR.Drone near strong magnetic fields, radio waves or areas with strong radiations (this may prevent the camera of the Parrot AR.Drone from operating correctly). You should also avoid using your Parrot AR.Drone in areas subject to Wi-Fi® networks (such as for instance internet Wi-Fi routers or boxes etc.). This may create interferences that could reduce the performance of the Parrot AR.Drone.

Warnings concerning the use of the battery

- ❏ Lithium Polymer batteries are extremely hazardous and liable to cause serious injuries to persons or property. The user accepts liability for the use of a Lithium Polymer battery. As the manufacturer and the distributor cannot ensure the battery is used correctly (charging, discharging, storage, etc.), they cannot be held liable for damages caused to persons or property.
- ❏ In the event of battery leakage, avoid the liquid coming into contact with skin and eyes. In case of contact with the skin, wash copiously with soap and water. In case of contact with the eyes, rinse copiously with cold water and consult a doctor. If you notice a suspicious smell or noise or observe smoke around the charger, disconnect it immediately.
- ❏ Non-compliance with the instructions below could result in gas being given off, fire, electric shock or an explosion.

Charging

- ❏ The Parrot battery shall only be used together with the Parrot charger. Examine the charger regularly for damage to the cord, plug, enclosure or other parts. Never use a damaged charger. Never charge a swollen battery, a leaky battery or one which has been damaged.
- ❏ Do not overcharge the battery. When the battery is fully charged, disconnect it from the charger. Do not put the device back in the charger once charging has finished. You risk causing overheating.
- ❏ Do not charge the battery near inflammable materials or on an inflammable surface (carpet, wooden flooring, wooden furniture, etc.) or conducting surface. Do not leave the battery unattended during charging.
- ❏ Never charge the device immediately after use while it is still hot. Let it cool down to room temperature. Do not charge the battery while it is still connected to the AR.Drone.

- ▣ Batteries are only to be charged under adult supervision.
- ▣ Do not cover your product or its charger while the battery is charging.
- ▣ Recharge the battery at a temperature of between 0°C and 40°C.

Usage and storage

- ▣ Do not use the battery if the plastic cover has been torn or compromised in any way. Do not insert or remove the battery while the power is on. Do not expose the battery to excessive physical shock. Never use a swollen battery or a leaky battery, or one which is damaged or giving off a unusual odour.
- ▣ Keep the battery out of the reach of children.
- ▣ Do not expose the battery to heat or dispose of a fire. Do not allow the battery to come into contact with any kind of liquid. Do not leave your device out in the rain or near a source of moisture. Do not put the battery in a microwave oven or in a pressurised container.
- ▣ Do not attempt to dismantle, pierce, distort or cut the battery and do not attempt to repair the battery. Do not place any heavy objects on the battery or charger. Avoid dropping the battery.
- ▣ Do not clean the charger with a solvent, denatured alcohol or other inflammable solvents.
- ▣ It is essential to avoid short circuits. Avoid direct contact with the electrolyte contained within the battery. The electrolyte and electrolysis vapours are harmful to health.
- ▣ Keep your device at ambient temperature. Do not expose your device to extreme temperatures. Do not subject your device to large temperature variations. Do not place your product near a source of heat.
- ▣ Remove the battery when you are not using the device.
- ▣ Disconnect the charger when you are not charging the battery.

Battery disposal

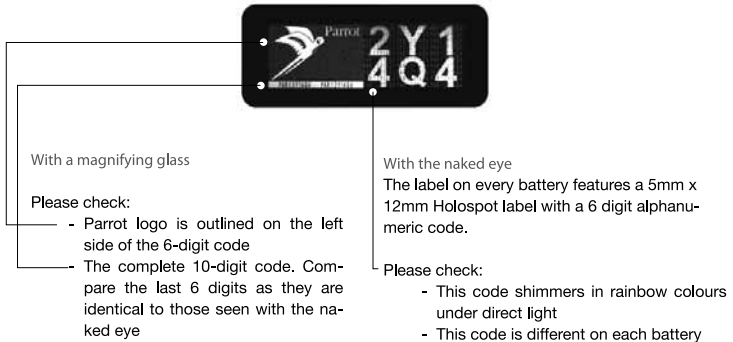
Discarding batteries in your general household waste can be harmful to the environment. Damaged or unusable batteries must be disposed of in a container specially reserved for this purpose. When disposing of the battery, follow appropriate local guidelines and regulations. For further information contact your local solid waste authority.

Extra batteries – protection against counterfeiting

Using a counterfeit Lithium Polymer battery which does not meet the quality requirements defined by Parrot can cause irreversible damages to the AR.Drone as well as serious injuries to persons or property.

How can I check if my product is genuine?

All original AR.Drones and spare parts contain a tesa Holospot®. With tesa Holospot®, every original product is unique and contains unambiguous, intelligent information about itself. Each Holospot® has multiple security features in different layers which make the Holospot® 100% unforgeable.





GETTING STARTED

Before using and flying the AR.DRONE please carefully read and follow all instructions figuring in these guidelines.

Charging the AR.Drone battery

☒ *Diagrams p.06.*

1. Connect the battery to the charger.
2. Select the plug adapter corresponding to your country and connect it to the transformer. Do not force the adapter into the transformer.

WARNING: Do not insert the adaptor into the transformer by force.

3. Connect the power cable to the transformer then plug it into the mains socket.

Note: The battery charging time is approximately 1 hour 30 minutes. The status LED turns green when the AR.Drone battery is fully charged. Check out our flying tutorials on www.parrot.com while the battery is charging.

Installing the AR.Drone

The AR.Drone can be either operated indoors and outdoors. However, in order to get familiar with the AR.Drone, we strongly recommend you the first time you fly the AR.Drone to do it indoor or if outdoor in an air protected area. We recommend also before launching a game, to train yourself several times so to get familiar with piloting and controlling the AR.Drone.

- To fly the AR.Drone indoors:
 - use the AR.Drone in a minimum area of 4 meters x 4 meters and place it in the middle of the room.
 - please ensure that the area shall be free from any object, young children or animals
 - install the hull in order to protect the AR.Drone in case of collision with any object ; ☒ *Diagram p.07*

- To use the AR.Drone outdoors:
 - install the outdoor hull ;
 - although the autopilot compensates turbulences due to the wind, the AR.Drone should not be flight at wind speeds higher than 7 mph.

Note: To play the multi-player game AR.Flying Ace, the stickers provided in the packaging must be stuck on the internal surface at the locations indicated by the small marks. ☒ Diagram p.10.

Connecting the iPhone to the AR.Drone

1. Remove the hull and insert the battery in the AR.Drone. Make sure the battery belt is fastened and connect the battery to the AR.Drone.
> Wait until the led beneath the AR.Drone becomes green.
2. On your iPhone®, select **Settings > Wi-Fi**.
> The list of available Wi-Fi networks is displayed.
3. Select ardrone.
4. Wait until the Wi-Fi logo appears on top of the iPhone screen and push the home button.
5. Launch the Parrot AR.Drone application.
> The video stream from the AR.Drone is now displayed on your iPhone. Both devices are connected.

Notes:

- We recommend you turn on the airplane mode to use the AR.Drone.
- If the Wi-Fi logo is not displayed on your iPhone, make sure an IP address is assigned to the AR.Drone. To do so, select **Settings > Wi-Fi** then touch the arrow besides the AR.Drone. An IP address starting with 192.168.1. should be displayed in the IP field.



FREE FLIGHT


We recommend you check out our flying tutorials on www.parrot.com before your first flight.

Taking off

1. Install the battery into the battery box and connect it to the AR.Drone.
 ⊗ *Diagram p.07.*
2. Place the AR.Drone in a clear, flat and dry area and position yourself at least 1 meter behind it.

Note:

- The front of the AR.Drone is easily identifiable due to the camera located in the nose of the device.
- If you do not initialise the AR.Drone on a flat surface, the base data of the on-board computer will be incorrect. If this happens, disconnect the battery, then start again when the AR.Drone is on a flat surface.

3. Tap the Tools button then:
 - a. Make sure the AR.Drone is on a flat area then tap the flat Trim button.
 - b. Select the hull you attached to the AR.Drone and select the type of flight.
 - c. Tap OK to validate.
4. Tap .
 > The engines start and the AR.Drone stabilizes itself automatically at an altitude of 1 meter.

WARNING: Do not launch the AR.Drone before starting it.

Flying the AR.Drone

- Slide the joystick to the right / left to move the AR.Drone to the right / left.
- Use the joystick to move the AR.Drone 10 cm higher / lower. Hold down the joystick to the top / bottom to move up/down the AR.Drone continuously.



Note: Once the AR.Drone has reached an altitude of over 6 meters, height will have to be managed manually (without the 10 cm steps). Be carefully when piloting manually the AR.Drone in order to keep the control of the device and avoid any harm to people, property and animals.


- Press the button on the bottom left and lean the iPhone to the right / left to move the AR.Drone to the right / left.
- Press the button on the bottom left and lean the iPhone forward / backward to move the AR.Drone forward / backward.
- You can also combine several moves at the same time.



Autopilot

If you remove your finger from the iPhone buttons, the autopilot fixes the AR.Drone's position and keeps it in hover flight.

Landing safely

Make sure the AR.Drone is flying above a clear, solid, flat and dry area and tap .

Disconnection during the flight

- If the AR.Drone is too far from the iPhone (about 50 meters depending on the wi-fi environment) it may disconnect. Do not close the iPhone application. Come closer to the AR.Drone to reconnect automatically. The AR.Drone's position will be fixed by the autopilot until you reconnect. If the AR.Drone was flying above 6m of altitude before disconnection then the autopilot returns it down below 6m where it can manage height.
- If you receive a phone call while flying the AR.Drone, the autopilot fixes the AR.Drone's position and keeps it in hover flight. If you selected the Indoors mode, the autopilot will land the AR.Drone automatically.

Battery

- The battery indicator on the screen of the iPhone shows battery level and becomes red when the AR.Drone battery is running low.
- If the battery is running low, the pilot will be requested to land safely. If the pilot fails in landing the AR.Drone in due time the autopilot will land the AR.Drone automatically.
- We recommend you to land your AR.Drone as soon as the battery level indicator becomes red in order to avoid any injury to any person, property or animal.

Piloting Hints and Tips

To get the best use out of your AR.Drone:

- Watch the tutorial videos on www.parrot.com.
- Respect the various flying levels and take time to master your piloting skills before setting off on more perilous adventures.
- All plastic protective films may be removed by the user.
- Observe the safety precautions on p.12 - 16.
- During your very first flights, always stand behind the AR.Drone. In this way the controls are highly intuitive. When the AR.Drone is coming towards you, the controls are reversed which requires greater piloting skill.
- Set your iPhone to in-flight mode before connecting to the AR.Drone.
- Avoid using your AR.Drone in areas where there are lots of Wi-Fi networks (routers, internet boxes etc.).
- When inside, find an obstruction-free area for your first flights.
- When outside, take note of the wind direction and place your AR.Drone in front of you, with the wind coming from behind.
- If you lose control of your AR.Drone, remove your fingers from the controls and it will stabilise itself automatically.
- Visit www.parrot.com for all the latest news about the AR.Drone and join the piloting community.



TECHNICAL SPECIFICATION

Running Speed : 18km/h

Weight

- without the hull: 360g
- with the hull: 400g

Dimensions

- without the hull: 45 x 29 cm
- with the hull: 52,5 x 51,5 cm

Battery

- Lithium polymer battery (3 cells, 11.1V, 1000 mAh)
- Charging time: 1h30
- Running time: 15 mn

Embedded computer system

- Processor ARM9 RISC 32 BITS - 468MHz
- DDR RAM 128 Mo - 200 MHz
- Wi-Fi b/g
- Linux OS

Ultrasound altimeter

- Emission frequency: 40kHz
- Range: 6 metres

Front Camera

- 93° wide-angle diagonal lens camera, CMOS sensor
- Video frequency: 15fps
- Resolution: 640x480 pixels (VGA)

Vertical Camera

- 64° wide-angle diagonal lens camera, CMOS sensor
- Video frequency: 60fps
- Resolution: 176x144 pixels (QCIF)



GENERAL INFORMATION

Warning

You should use the Parrot AR.Drone safely and responsibly at all times, so as to avoid any damage or harm being caused to any person, animal or property next to which you are flying the Parrot AR.Drone. In this respect you should ensure that you always operate the Parrot AR.Drone in compliance with this Quick Start Guide and our Safe Use of the Parrot AR.Drone instructions. Parrot also reminds you that you should not use the Parrot AR.Drone for any unauthorised or unlawful purposes, as you will otherwise be fully liable for any loss or damage caused as a result of such unauthorised use.

In particular, you should comply with any applicable data protection laws and refrain from operating the Parrot AR.Drone in any way that could interfere with any other person's privacy.

PARROT shall not be responsible for any consequences arising from the use of the product or the use of this guide, nor shall Parrot be responsible for any damage or accidental loss of data resulting directly or indirectly from the use of the product or the information contained in this guide.

Warranty

Without prejudice to any applicable statutory warranty, Parrot warrants that the Parrot AR.Drone will be free from defects in material

and workmanship for a period of 12-months from the initial date of purchase (excluding consumables which are warranted during 6 months from the initial date of purchase) upon presentation of proof of purchase to the retailer or to Parrot (including the date and place of purchase, product serial number).

During the contractual warranty period, any defective product should be returned in its original packaging to the retailer's or Parrot's after-sales service. After inspection of the product, Parrot will, at its sole discretion, either repair or replace the defective part or product, excluding any other indemnification of any nature.

Parrot's warranty does not cover:

- defects due to damage caused by an accidental collision or fall;
- defects due to abnormal use of the product or if spare parts have been installed without following the recommendations and instructions provided by Parrot in this guide or on www.parrot.com or if the Parrot AR.Drone has been customised by the end-user;
- defects caused by repairs carried out by the end-user or an unauthorised third party, except spare parts provided by PARROT;
- defects due to the use of spare parts not provided by PARROT in the original packaging.

- the use of spare parts not approved by Parrot, in particular, the use of batteries not approved by Parrot (genuine Parrot batteries can be identified by their hologram);
- defects caused by any reason other than a defect in material or workmanship
- the gradual power loss of the Parrot rechargeable battery (086x) over time, which does not constitute as a defect in material or workmanship,

If upon technical tests being carried out any product is found non defective (in particular an analysis of the flight data from the last 30 seconds of flight - results available upon request) we reserve the right to return such product to the sender at the sender's cost and to levy a charge to cover Parrot's technical test fees.

Upon expiration of the 12-month warranty period or if the defect is not covered by the warranty, any defective product can be returned to Parrot's after-sales service (see www.parrot.com for instructions) in order to be repaired or for a defective part to be replaced at the sender's costs. Repair will be carried out only after acceptance of the corresponding quotation.

Except in relation to consumables, spare parts are subject to a 12 month warranty and are subject to the same terms and conditions as those described above.

The warranty does not cover: damage to non Parrot products, including devices used to ope-

rate the AR.Drone.

Changes to this Quick Start Guide

The explanations and specifications in this guide are given for information only and may be modified at any time without prior notice. The latest version of this Quick Start Guide will however be available from our website at www.parrot.com. The explanations and specifications contained in this guide are deemed to be correct at the time of printing.

Although the utmost care has been taken when writing this guide, in order to provide you with information which is as accurate as possible. Parrot shall not be held responsible for any consequences resulting directly or indirectly from the use of the information herein.

Parrot reserves the right to amend or improve the product design or user guide without any restrictions and without any obligation to notify users. As part of our ongoing objective to upgrade and improve our products, the product that you have purchased may therefore differ slightly from the model described in this guide.

Disposal of this product at the end of its life




At the end of this product's life, please do not dispose of this product in your general household waste. Instead, in order to prevent possible harm to the environment or human health from uncontrolled waste disposal, please dispose of this product separately in accordance with your local laws and regulation.

For more information on the separate collection systems for waste electrical and electronic equipment that are available for consumers, near your home, free of charge, please contact your local municipality authority. You can also contact the retailer from which you purchased your Parrot AR.Drone – he might have put in place recycling services or he may be part of a specific recycling scheme.

This product will be then treated in an environmentally sound manner at a licensed recycling plant and its components will be recovered, recycled or reused in the most efficient manner, in compliance with the requirements of the Directive on Waste Electrical and Electronic Equipment (2002/96/EC) of 27 January 2003 (as subsequently amended or replaced).

Declaration of Conformity CE

 Parrot SA, 174 quai de Jemmapes, 75010 Paris, France, declare under their sole responsibility that the product described in this user guide complies with technical standards EN 301489-17, EN300328, EN71-, EN71-2, EN71-3, EN62115.

FCC Compliance Statement

This device complies with part 15 of a FCC rules Industry Canada. Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference,

including interference that may cause undesired operation of this device.

Caution : any changes or modifications not expressly approved by Parrot could void the user's authority to operate the equipment.


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Trademarks

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 iPhone ® is a trademark of Apple Inc, registered in the USA and in other countries.

The Wi-Fi Alliance Member Logo is a logo of the Wi-Fi Alliance.

Wi-Fi ® is a registered trademark of the Wi-Fi Alliance.

All other trademarks mentioned in this guide are protected and are the property of their respective owners.

Safety Instructions

CAUTION: To reduce the risk of fire, do not expose this device to rain or dampness.

1. Read these instructions.
2. Keep these instructions.
3. Pay attention to all warnings.
4. Follow all instructions.
5. Do not install the device near a source of heat. Radiators, ovens or other devices (including amplifiers) which produce heat.
6. Do not change the polarised connectors.
7. Only use attachments/accessories specified by the manufacturer.

Warning

Read the entire instruction sheet included with this battery. Failure to follow all instructions could cause permanent damage to the battery and its surroundings, and cause bodily harm.

- NEVER use anything EXCEPT a LiPo approved charger.
- ALWAYS use a LiPo cell balancing charger or a LiPo cell balancer.
- NEVER charge through the discharge lead.
- NEVER trickle charge, or allow to discharge below 2.5V per cell.
- NEVER allow the battery temperature to exceed 140°F (60°C).
- NEVER disassemble or modify pack wiring in any way or puncture cells.
- NEVER place on combustible materials or leave unattended during charge.
- ALWAYS charge in a fireproof location.
- ALWAYS set charger's output volts to match battery volts.
- ALWAYS KEEP OUT OF REACH OF CHILDREN.
- IMPROPER BATTERY USE MAY RESULT IN A FIRE, EXPLOSION OR OTHER HAZARD.



**Our hotline is at your disposal from Monday to Friday between
9 am and 6 pm (GMT + 1) - Hot-line@parrot.com**

Italy : [+39] 02 59 90 15 97

Spain : [+34] 902 404 202

UK : [+44] (0)844 472 2360

Germany : 0900 1727768

USA : [+1] (877) 9 Parrot (*toll free*)

China : [+86] 755 8203 3307

Hong Kong : [+852] 2736 1169

France : 01 48 03 60 69

Europe : [+33] 1 48 03 60 69 (*Spoken languages : French, English and Spanish*)





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move wireless

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