REELY

GB Operating Instructions

Electrical quadrocopter “Rocket Drone FPV” RtF

Item No. 1646409

CE

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GB

Page

1. Introduction

Dear customer,

Thank you for purchasing this product.

This product complies with statutory national and European regulations.

To ensure that the product remains in this state and to guarantee safe operation, always follow the instructions in this manual.

These operating instructions are part of this product. They contain important information on setting up and using the product. Do not give this product to a third party without the operating instructions.

Keep these operating instructions in a safe place for future reference.

If there are any technical questions, please contact:

International: www.conrad.com/contact

United Kingdom: www.conrad-electronic.co.uk/contact

2. Explanation of symbols

The symbol with an exclamation mark in a triangle is used to highlight important information in these operating instructions. Always read this information carefully.

The arrow symbol indicates special information and advice on how to use the product.

3. Intended use

The "Rocket Drone FPV" is an electrically-powered quadcopter that is controlled wirelessly using a remote control. It is only designed for private use during permitted operating times.

It is not suitable for other purposes. Using this product for any purposes other than those described above may damage the product and result in a short circuit, fire, electric shock or other hazards. Always follow the safety information in these instructions!

The product must not become damp or wet.

This product is not a toy and must be kept out of the reach of children under 14 years of age.

Always follow the safety information in these operating instructions. It contains important information on how to handle the product safely.

You are responsible for the safe operation of this model!

4. Package contents

- Pre-assembled "Rocket Drone FPV" quadcopter
- Remote control
- LiPo rechargeable battery
- USB LiPo battery charger
- Landing gear
- 4x rotor guards
- Smartphone holder
- Two spare rotors (front)
- Two spare rotors (rear)
- Small parts (screws, screwdriver)
- Operating instructions

Up-to-date operating instructions

To download the latest operating instructions, visit www.conrad.com/downloads or scan the QR code on this page. Follow the instructions on the website.

5. Product description

The "Rocket Drone FPV" quadcopter is a pre-assembled quadcopter with four rotors and a built-in camera. Quadcopters are already used professionally to complete a wide range of tasks. The outrigger arms on the four rotors can be folded inwards. This makes the quadcopter easy to transport.

The "Rocket Drone FPV" quadcopter features the latest microprocessor-driven electronics with altitude control and accelerometers, which stabilize its position and altitude. It also features a built-in camera for live transmission, which enables you to fly the quadcopter in "FPV" mode ("first person view"). You can also control the quadcopter with your smartphone and record images and videos.

The quadcopter features high-quality, powerful DC motors with a specially developed drive. An innovate control system and electronic self-stabilization make the quadcopter easy to control.

This product is designed for use in large, enclosed rooms/areas, but can also be used outdoors in still conditions. The built-in electronic controls (gyroscope) can balance out small undesired changes to the quadcopter's altitude, but cannot prevent them altogether. The quadcopter reacts sensitively to wind/draughts due to its lightweight design.

The remote control requires 4 AA batteries (not included).

6. Safety information

Damage caused due to failure to observe these instructions will void the warranty. We shall not be liable for any consequential damages.

We shall not be liable for damage to property or personal injury caused by incorrect handling or failure to observe the safety information! Such cases will void the warranty/guarantee.

Normal wear and tear and accidents or damage caused by a crash (e.g. a broken rotor or chassis components) are not covered by the guarantee/warranty.

Dear customer,

These safety instructions are designed to ensure the safe operation of the product and your personal safety. Read this section very carefully before using the product.

a) General information

Caution, safety hazard!

This model has the potential to cause damage to property and/or individuals.

Ensure that you are sufficiently insured, e.g. by taking out private liability insurance.

If you already have such a policy, check with your insurance company that use of this model is covered by the policy.

Important:

In some EU countries, you are required to have insurance when using a model aircraft.

Familiarize yourself with the local statutory regulations for using model aircraft. In Germany, for example, the regulations for model aircraft are stipulated in the German Air Traffic Act. Any breaches of the statutory regulations could lead to severe penalties as well as restrictions to your insurance cover.

- The unauthorized conversion and/or modification of this product is prohibited for safety and approval reasons.
- This product is not a toy and must be kept out of the reach of children under 14 years of age.
- The product must not become damp or wet.
- If you do not have sufficient knowledge of how to operate remote-controlled models, contact an experienced model user or a model club.
- Do not leave packaging material unattended, as it may become a dangerous toy for children.
- If you have any questions that are not answered by these operating instructions, contact us (see section 1 for contact information) or an experienced technician.

b) Before first use

- You must learn how to use and control remote-controlled quadcopters. If you have not driven such models before, proceed with caution and learn how the model reacts to remote control commands. Be patient!
- Ensure that there are no other models on the same frequency (2.4 GHz) within range of the remote control. Always check whether there are any other 2.4 GHz remote control systems that may interfere with the model.
- Conduct regular checks to verify that the model and remote control are safe to use. Inspect the model for any signs of damage, such as broken mechanical parts (e.g. rotors).
- All moving parts on the model should move freely, but there must be not any slackness in the bearing.
- Check that the rotors are secure and in the correct position before each use.
- Charge the battery in accordance with these instructions.
- Ensure that the remote control batteries have sufficient power remaining (use a battery tester). If the batteries are empty, replace all of the batteries at the same time. Never replace individual batteries.

c) During use

- Do not take any risks when using the model! Always use the model responsibly, otherwise you may endanger yourself and your surroundings.
- Improper use can cause serious injury and damage to property! Ensure that you maintain a sufficient distance from people, animals and objects.
- Select a suitable location to fly the quadcopter. Familiarize yourself with the local regulations for using model aircraft.
- Only fly the model when you are fully alert and able to respond. Fatigue, alcohol and medication can affect your ability to respond.
- Keep objects and body parts away from the rotors when the rotors are moving.
- Do not fly the model towards spectators or towards yourself.
- The motors, electronics and battery may heat up during use. Leave the quadcopter to cool down for 5-10 minutes before charging the battery.
- Always leave the remote control turned on when the model is in use. After landing, move the on/off switch on the quadcopter to the "OFF" position, and then switch off the remote control.
- In case of a fault or a malfunction, establish the cause of the problem before using the model again.
- Do not expose the model or the remote control to direct sunlight or excessive heat for prolonged periods.
- In the event of a severe crash (e.g. from a high altitude), the electronic gyro sensors may be damaged. Always check that the model is functioning properly before flying it again!
- In the event of a crash, switch off the rotor motors immediately. Rotating rotors may be damaged if they come into contact with obstacles or in the event of an impact. Check the rotors for any signs of cracks or damage before flying the quadcopter again!
- To avoid damaging the model due to a crash caused by an undervoltage/overdischarging of the battery, monitor the undervoltage indicators during the flight.
- Do not exceed the maximum range stated in the "Technical data" section of these instructions. The range is 50% lower when the quadcopter is controlled with a smartphone instead of the remote control. If the quadcopter goes out of range, you will not be able to control it and it will continue to fly until it crashes! This will void the warranty.

7. Battery information

Batteries present numerous safety hazards. Compared with conventional NiMH rechargeable batteries, LiPo/Li-ion rechargeable batteries have a high energy content. For this reason, it is essential to comply with safety regulations to prevent the risk of a fire or explosion.

Always observe the following safety information when handling batteries.

a) General information

- Keep batteries out of the reach of children.
- Do not leave batteries lying around, as they present a choking hazard for children and pets. Seek immediate medical advice if a battery is swallowed.
- Batteries/rechargeable batteries must never be short-circuited, taken apart or thrown into fire, as this may cause an explosion!
- When handling leaking or damaged batteries, always use suitable protective gloves to avoid burning your skin.
- Liquids that leak from batteries are very corrosive and may cause serious damage to objects or surfaces that come into contact with them. Always store batteries in a suitable location that is not prone to damage.
- Do not attempt to recharge disposable, non-rechargeable batteries. This may cause a fire or explosion! Non-rechargeable batteries are only designed to be used once and must be disposed of properly when they are empty. Only recharge compatible rechargeable batteries and ensure that you use a suitable battery charger.
- If you do not plan to use the model for an extended period (e.g. during storage), remove the batteries from the remote control to prevent them from leaking and causing damage. Disconnect the battery and remove it from the model.

  Keep the remote control batteries and quadcopter battery in a cool, dry place out of the reach of children. Install a smoke detector in the room. Batteries present a fire hazard and may generate toxic fumes. This applies in particular to model batteries, which are subjected to high charging/discharge currents and vibrations.
- Always exchange the entire set of batteries in the remote control. Do not mix full batteries with half-full ones. Always use batteries of the same type and from the same manufacturer. Never mix disposable batteries with rechargeable batteries.
- When inserting batteries into the remote control or connecting the quadcopter battery, pay attention to the polarity markings (plus/+ and minus/-) to ensure that the batteries are connected in the correct polarity. Connecting the batteries in the wrong polarity may damage the model and the batteries and cause a fire or explosion!
- Do not expose the charger or quadcopter battery to extremely high/low temperatures or direct sunlight.
- Batteries must not become damp or wet. The same applies to the charger. The charger must only be used in dry, enclosed indoor areas. The quadcopter battery may cause a fire or explosion if exposed to moisture/liquids!

  Lithium rechargeable batteries (e.g. LiPo/Li-ion batteries) contain chemicals that are very sensitive to moisture.

- Disconnect the quadcopter battery from the model before connecting it to the charger. Never leave the battery connected to the quadcopter when it is charging. This may damage the charger, quadcopter or the battery! Remove the battery from the quadcopter before charging.
- Place the charger and rechargeable battery on a non-flammable, heat-resistant surface (e.g. stone tiles). Keep the charger and battery away from flammable objects. Maintain a sufficient distance between the charger and the battery. Never place the battery on top of the charger.
- Do not charge batteries when they are still hot (e.g. due to a high discharge current in the model). Allow the battery to cool down to room temperature before charging it.
- Ensure that there is sufficient ventilation, as the battery and charger may heat up during the charging process. Never cover the charger or the quadcopter battery!
- Never leave batteries unattended when they are charging. Inspect the charger at regular intervals to ensure that the battery is not overheating or expanding. This indicates an imminent risk of a fire or explosion. If the battery overheats or starts to expand, disconnect it from the charger immediately and take it to a location where it will not cause any additional damage if it explodes or catches fire (e.g. outdoors).
- Disconnect the quadcopter battery from the charger when the battery is fully charged.
- Never damage the casing of a rechargeable battery. Never charge damaged, leaking or deformed batteries. This may cause a fire or explosion! Discontinue use immediately and dispose of the battery in an environmentally friendly manner.
- Rechargeable batteries should be charged regularly (approx. once every 2 - 3 months) to prevent them from overdischarging. This may result in permanent damage and render the batteries useless.

  LiPo/Li-ion batteries usually retain their charge for several months. However, if the batteries overdischarge, this will result in permanent damage and render them useless.

b) Additional information about lithium rechargeable batteries

Modern lithium rechargeable batteries have a significantly higher capacity than NiMH and NiCd batteries and are more lightweight. This makes LiPo (lithium polymer) or Li-ion batteries particularly suitable for use in model making.

However, lithium batteries require particular care to ensure safe charging/discharging, operation and handling.

The following section provides an overview of the potential hazards associated with lithium batteries and explains how these hazards can be avoided to ensure a long lifespan.

- The casing of many lithium batteries is made of a thick film, which is very sensitive. Do not dismantle, drop or insert any objects into lithium batteries. Do not apply mechanical loads or pull on the battery's connection cables. This may cause a fire or explosion!
- Always observe these instructions when inserting or removing a battery from your model.
- Ensure that the battery does not overheat during use, recharging, discharging, transport or storage. Do not place rechargeable batteries next to sources of heat or expose them to direct sunlight. This may cause the battery to overheat, which can cause a fire or explosion! The temperature of the battery must not exceed +60 °C (or the temperature indicated on the battery).
- If there are any signs of damage or the outer casing starts to swell or expand, discontinue use immediately. Do not continue to charge it, as this may cause a fire or explosion!

- Exercise caution when handling the damaged battery and use suitable protective gloves. Dispose of the battery in an environmentally friendly manner.
- Never store damaged batteries in an apartment or in a house/garage. Damaged or swollen lithium batteries may catch fire.
- Always use a compatible charger to charge lithium batteries and ensure that the charging specifications are correct. Do not use NiCd, NiMH or lead-acid battery chargers, as these may cause a fire or explosion! Always select the correct charging specifications for your rechargeable battery.
- Always use a balancer when charging a lithium battery with more than one cell (the charger comes with a built-in balancer).
- The charge rate for LiPo/Li-ion batteries must not exceed 1C (or the value stated in the battery instructions). This means that the charging current must not exceed the battery capacity (e.g. battery capacity = 1000 mAh, max. charging current = 1000 mA = 1 A).
- The discharge current must not exceed the value stated on the battery.
- For example, if "20C" is printed on the LiPo/Li-ion battery, the maximum discharge current is 20 times the battery's capacity (e.g. battery capacity = 1000 mAh, max. discharge current = 20C = 20 x 1000 mA = 20 A).
- Exceeding the maximum current may cause the battery to overheat or become deformed, which can lead to a fire or explosion!
- The printed value (e.g. 20C) indicates the maximum current that the battery can deliver for a short period. The continuous current should not be higher than one half of the stated value.
- Do not allow the individual cells of a lithium battery to become fully discharged. This may destroy the battery or cause permanent damage.
- If the model does not have overdischarge protection or a low battery indicator, stop using it before the battery becomes empty.

8. Preparations for flying

a) Inserting batteries into the remote control

Remove the battery compartment cover on the back of the remote control.

Remove the screw on the battery compartment cover. Slide the cover in the direction of the arrow (see marking on battery compartment cover), and then remove the cover from the back of the remote control.

Insert four AA batteries in the correct polarity. Pay attention to the symbols on the battery compartment and batteries.

Replace the battery compartment cover and screw it in place.

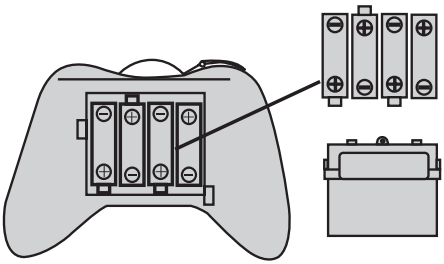

Figure 1

⟶ Using rechargeable batteries is not recommended due to their lower voltage (disposable batteries = 1.5 V, rechargeable batteries = 1.2 V) and their tendency to self discharge (the remote control would quickly indicate that the batteries are empty).

The remote control only uses a small amount of electricity, therefore disposable batteries will last for significantly longer. We recommend using high-quality alkaline batteries.

b) Charging the quadcopter battery

Use a USB power adapter or USB cigarette lighter (not included) to power the USB charger. This must be able to deliver an output current of at least 1000 mA.

A computer USB port or a USB hub with a its own power adapter is not recommended, as the current consumption (approx. 1000 mA) may exceed the maximum current of a port. This would damage the computer.

Open the battery compartment cover and remove the quadcopter battery (see figure 2).

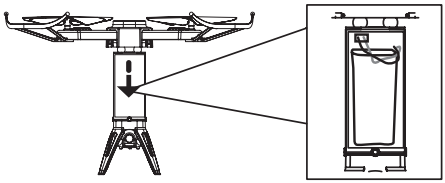

Figure 2

Insert the USB plug on the USB battery charger into the USB power supply (e.g. a USB power adapter).

Insert the small connector on the USB charger into the corresponding socket on the rechargeable battery (see figure 3). Ensure that you insert the connector in the correct orientation (align the connector with the socket on the battery).

Charging will begin provided that the battery is not defective (high impedance/disconnected) and the charger is connected to a power supply. The red LED indicator on the USB battery charger lights up to indicate that the battery is charging.

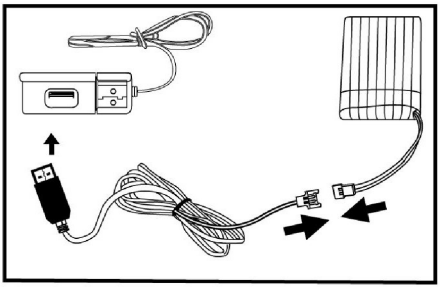

Figure 3

LED indicator status:

LED on: Battery is charging

LED off: The battery is full/fully charged

When the battery is fully charged (LED on the USB charger switches off), disconnect the battery from the charger and insert it into the battery compartment on the quadcopter.

⟶ The battery should be connected to the quadcopter before take-off.

c) Final assembly

Attach the landing gear by sliding it onto the body (see figure 4). Ensure that the slot for the microSD card is aligned with the slot on the landing gear (see right-hand image).

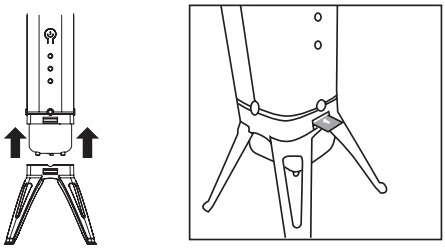

Figure 4

The quadcopter features swivel-mounted outrigger arms. This ensures a compact design and makes the quadcopter easier to transport.

The outrigger arms must be folded outwards before take-off. Carefully turn each of the four outrigger arms outwards until they click into place. The outrigger arms can be folded inwards for transport or storage by sliding the unlock buttons (see figure 5).

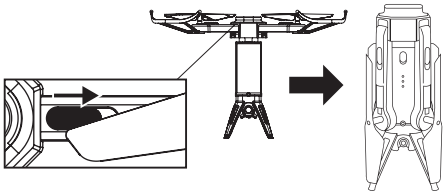

Figure 5

Fix each of the four rotors in place with a screw (A) (see figure 6). Ensure that the rotors rotate in the same direction as the motor (see markings on rotors and outrigger arms).

Proceed with caution and do not use any force.

Refer to the instructions in section 21. b).

The quadcopter comes with four rotor guards (B) to protect the rotors. Attach a rotor guard to each outrigger arm (see figure 6).

Pay attention to the contours on the brackets; these must fit into the corresponding holes on the rotor arm. Fix the rotor guards in place with a screw (C).

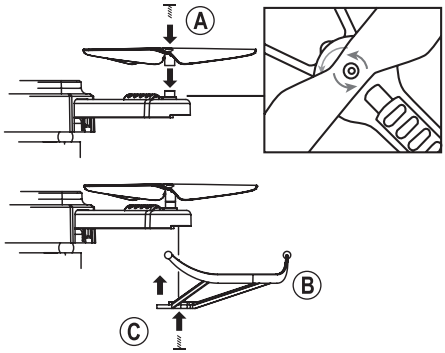

Figure 6

9. Remote control buttons

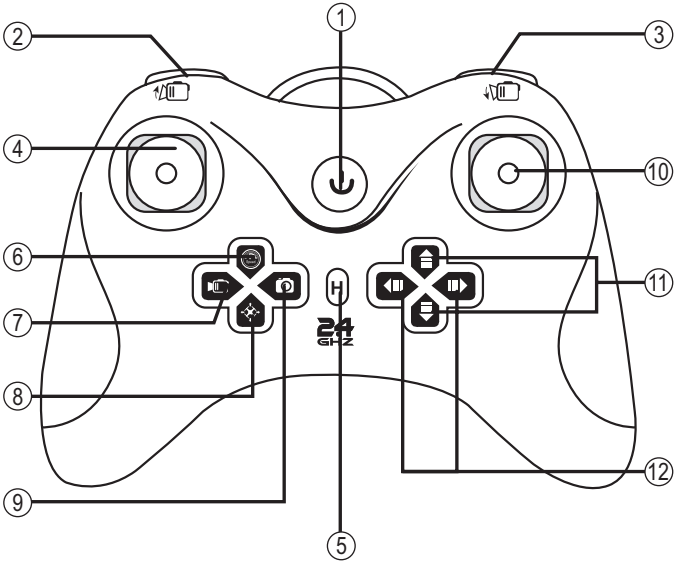

Figure 7

1 On/off switch with LED indicator
2 Swivel camera upwards
3 Swivel camera downwards
4 Left-hand control lever (rise/fall and yaw)
5 Start rotors/automatic landing button
6 Flight mode button
7 Start/stop video recording
8 Headless mode button
9 Photo capture button
10 Right-hand control lever (roll and pitch)
11 Pitch trim
12 Roll trim

The smartphone holder is shown in figure 8. This allows you to attach smartphones with a width of up to 100 mm. The holder is fixed to a second battery compartment cover.

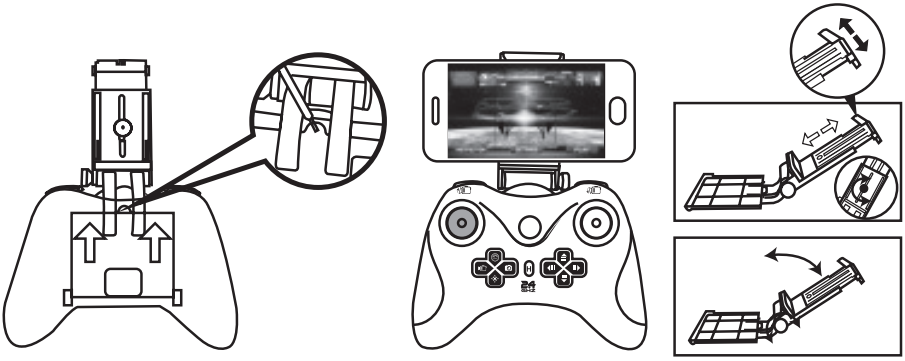

Figure 8

If you fly the quadcopter (e.g. in FPV mode) and wish to attach a smartphone to the remote control, remove the normal battery compartment cover and use the battery compartment cover with a smartphone holder. The battery compartment cover must be fixed in place with a screw.

Insert your smartphone into the folder, slide the holder together and fix it in place with the rear screw. You can adjust the angle of the smartphone holder in several positions. After choosing the desired position, tighten the screw on the side of the holder.

10. Safety features

→ The "Rocket Drone FPV" quadcopter and remote control come with a range of safety features to prevent the model from being damaged and reduce possible damage to a minimum. The LED indicator on the quadcopter indicates when a safety feature is activated and the remote control triggers an optical alarm.

Remote control

The battery status is continuously checked when the remote control is in use. If the battery voltage drops below a certain level, the LED on the on/off switch (figure 7, position 1) will start to flash. If this occurs, stop flying the quadcopter immediately and replace the remote control batteries.

Model

The LEDs in the quadcopter chassis stay constant when the quadcopter is paired with the remote control and receiving a signal. If the LEDs are flashing, this indicates that the quadcopter is not receiving a signal and you will need to repeat the pairing process.

If the model lands on its side and the inclination is greater than 45°, the motors will switch off automatically. You can manually switch off the motors by holding down both of the camera control buttons (see figure 7, positions 2 and 3). The app has an icon for switching off the motors.

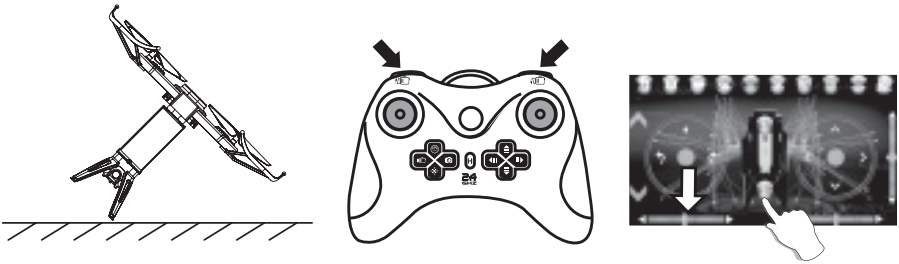

Figure 9

The quadcopter also monitors the voltage of the built-in quadcopter battery. When the battery is full, all three LEDs in the chassis will turn on. The two upper LEDs will turn off as the battery discharges. If the battery voltage drops below a critical level for a certain duration, the last LED will start to flash.

If the battery voltage stays below the critical level (the last LED flashes), the quadcopter will initiate an emergency landing and the motors will switch off.

→ When the last LED starts to flash, this indicates that the battery only has enough charge to power the quadcopter for 20 - 30 seconds in order to bring the model back to its take-off position.

When the quadcopter battery voltage drops below a certain level, the remote control will be disabled and the quadcopter will initiate an emergency landing. This process cannot be controlled with the remote control.

If the model is over a body of water, tree, house, street, people, animals or other objects and/or the model is higher than 1 m above the ground, the model may be damaged and cause injury or damage to property.

The model features an infrared object detection feature. An infrared LED is attached to each side of the model above the landing gear. The light from the infrared LEDs is invisible to the human eye.

The infrared beam is reflected by obstacles/objects (e.g. a wall). These reflections are detected by an infrared receiver on the bottom of the chassis, which sends a signal to the electronic control system. The control system then attempts to avoid the obstacle by issuing control commands.

This feature is enabled by default when the quadcopter is switched on for the first time. To disable this feature (before starting the rotors), hold down the photo button on the remote control (see figure 7, position 9) for approximately three seconds.

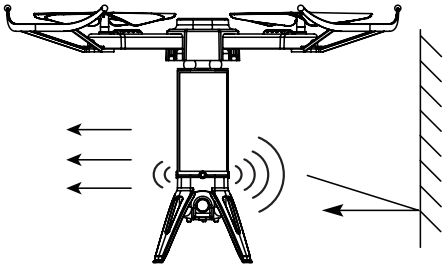

Figure 10

The LEDs on the chassis of the quadcopter will flash slowly to indicate that the feature is disabled. The LEDs will flash quickly when the feature is enabled.

⟶ The obstacle detection feature only works when the quadcopter is hovering. It does not override remote control commands (e.g. pitch = forwards/backwards). For example, if you fly towards an obstacle and do not move the pitch/roll lever (see figure 7, position 10) to the neutral position, the quadcopter will hit the obstacle.

The object detection feature may be impaired in narrow rooms. If this occurs, you will need to intervene with the necessary commands.

Sources of infrared light (e.g. strong sunlight or artificial light), reflections, sloping walls/roofs or objects with holes (e.g. trees) can also impair the object detection feature.

These limitations are due to the infared technology used.

11. Before first use

⟶ This manual uses the standard terms for controlling a quadcopter. These are used in aviation terminology and are in widespread use.

Directions are given from the perspective of a "virtual" pilot. The direction is indicated by the three green LEDs in the chassis (these indicate "backwards").

a) Hovering the quadcopter

Hovering denotes a status in which the quadcopter neither rises nor falls. This means that the lifting force is equal to the weight.

After starting the rotors with the "Start rotors/automatic landing" button (figure 7, position 5), slide the left-land lever forwards to increase the motor speed and make the quadcopter move upwards. Pull the lever backwards to make the quadcopter fall. When the lever is in the neutral position, the quadcopter uses the built-in sensors to maintain the current altitude.

Figure 11

⟶ The quadcopter may be affected by turbulence and air currents during take-off and when the quadcopter is just above the ground. This may cause the quadcopter to respond more quickly to remote control commands or move forwards, backwards or sideways. This so-called "ground effect" disappears at an altitude of approximately 50 cm.

b) Yaw function

"Yaw" refers to the rotation of the quadcopter about the vertical axis. This movement occurs either unintentionally due to the torque of the rotors, or intentionally to change the flight direction. The yaw is controlled by changing the speed of the individual rotors.

Move the left-hand lever (figure 7, position 4) to the left to rotate the quadcopter to the left, or move the lever to the right to rotate the quadcopter to the right.

Figure 12

c) Pitch function

"Pitch" refers to the movement of the quadcopter about the horizontal axis (comparable to a nodding head). This makes the quadcopter accelerate/brake forwards or backwards.

Move the right-hand lever (figure 7, position 10) forwards to make the quadcopter move forwards, or pull the lever backwards to make the quadcopter move backwards.

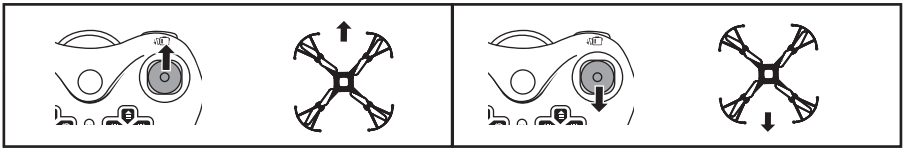

Figure 13

d) Roll function

"Roll" refers to the movement of the quadcopter about the longitudinal axis (comparable to the sidewards movement of a ball or crab). One side of the quadcopter is lifted to make the quadcopter move sideways (independent of the forwards/backwards motion).

Move the right-hand lever (figure 7, position 10) to the left to make the quadcopter move to the left, or move the lever to the right to make the quadcopter move to the right.

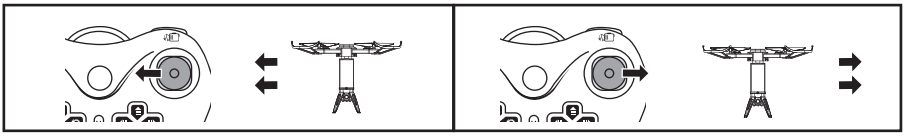

Figure 14

e) Flight mode

Depending on your level of experience, you can choose between two flight modes. To change the flight mode, press the flight mode button (figure 7, position 6) on the remote control.

Beginner mode restricts the sensitivity of control commands so that you can quickly learn how to fly the quadcopter. This mode is recommended for pilots with no or very little experience of quadcopters. Beginner mode is enabled by default each time you switch on the remote control.

Advanced mode is recommended for pilots with experience of flying other quadcopter models. In this mode, the quadcopter is significantly more agile than in beginner mode. To enable advanced mode, press the flight mode button (figure 7, position 6) on the remote control numerous times until you hear two beeps. Press the button again to switch back to beginner mode (indicated by a single beep).

⟶ In the app there are three different modes. Professional mode is recommended for pilots with extensive quadcopter experience. In this mode, the quadcopter is more agile than in advanced mode. To enable professional mode, touch the flight mode symbol (figure 25, position 5) on your smartphone numerous times until the maximum level is indicated.

12. Starting the quadcopter

→ You must learn how to use and control a remote-controlled quadcopter. If you have not driven such models before, proceed with caution and learn how the model reacts to remote control commands. Be patient! Refer to the instructions in section 11.

Do not take any risks when using the product! Always use the model responsibly, otherwise you may endanger yourself and your surroundings.

Charge the quadcopter battery and insert it into the battery compartment. Connect the battery and close the battery compartment.

Switch on the quadcopter (press the button above the LEDs). The LEDs will flash quickly and then flash once per second.

Place the model on a level, smooth surface (e.g. stone floor). Carpets/rugs are not suitable, as the landing arms may get caught in the material. The (green) LEDs should point backwards and indicate "backwards".

Switch on the remote control using the on/off switch. The remote control will beep to indicate that it is switched on and the LED indicator on the switch will start to flash.

Push the left-hand lever (figure 7, position 4) forwards, and then pull it backwards. The LEDs on the remote control and quadcopter will stay constant. Move the left-hand lever back into the neutral position.

The quadcopter is now paired with the remote control and ready for use.

Press the "Start rotors/automatic landing" button (figure 7, position 5) to start the rotors.

Slowly move the left-hand lever forwards to increase the rotor speed. Wait until the quadcopter takes off and hovers in front of you approximately 1.5 m above the ground. Avoid sudden and excessive movements. Observe whether the quadcopter drifts, and if so, in which direction it drifts. If the quadcopter drifts sideways ("roll") or forwards/backwards ("pitch"), move the right-hand lever in the opposite direction.

To land the quadcopter, slowly pull the left-hand lever backwards when the quadcopter is in the desired landing position and wait until the quadcopter reaches the ground. A firm landing is permissible and should not be corrected with abrupt commands.

To turn off the rotors, pull the left-hand rotor (figure 7, position 4) downwards for approximately two seconds until the rotors stop moving. Alternatively, press the "Start rotors/automatic landing" button (figure 7, position 5) again.

Try to land the quadcopter in a vertical position (like a helicopter). Avoid landing at high horizontal speeds (like an aeroplane). If you have not already done so, switch off the motors after landing.

Practice take-off and landing a few times to get a feel for the quadcopter. Once you are reasonably confident, you can start controlling the flight direction using the yaw, pitch and roll functions (see instructions in section 11). Always move the controls slowly and practice a few times before attempting a new manoeuvre. The first flights should not last longer than 30 to 60 seconds.

Once you are familiar with how the quadcopter responds to your commands, you can practice other manoeuvres. Start with simple manoeuvres (e.g. moving 1 metre forwards/backwards (pitch function)), and then practice tilting left/right (roll function). Once you have practised these manoeuvres, you can practice circles and figures of eight.

To switch off the quadcopter, switch off the rotors after landing and move the on/off switch on the quadcopter to the "OFF" position (the LEDs will turn off). Then switch off the remote control.

13. Trimming the quadcopter

⟶ The quadcopter is not 100% stable and may drift in a certain direction. This is caused by external factors (e.g. wind) and incorrectly calibrated sensors (gyroscopes). The drift can be largely eliminated by calibrating the sensors and using the trim functions.

If the quadcopter drifts in one direction, trim the quadcopter in the opposite direction using the corresponding trim on the remote control.

For example, if the quadcopter drifts forwards (pitch), press the backwards pitch trim button (figure 7, position 11) numerous times until the quadcopter stops drifting forwards.

If the model drifts backwards, use the forwards trim button (figure 7, position 11).

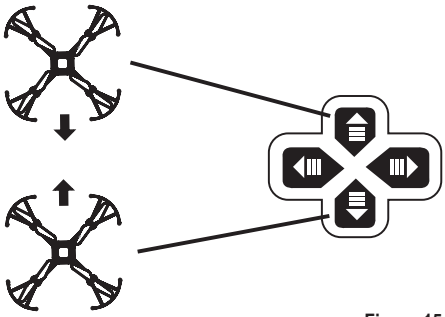

Figure 15

If the quadcopter drifts to the left (roll), press the right-hand roll trim button (figure 7, position 12) numerous times until the quadcopter stops drifting to the left.

If the model drifts to the right, use the left-hand trim button (figure 7, position 12).

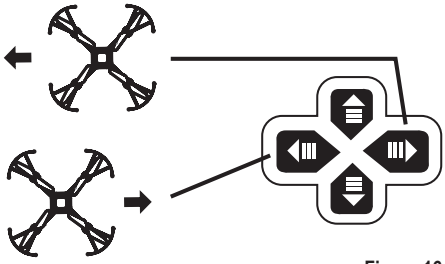

Figure 16

14. Calibrating the sensors

⟶ If the trim is not sufficient to make the quadcopter hover in a fixed position (e.g. after a crash), the sensors need to be recalibrated.

Follow the steps below:

Place the quadcopter on a level surface.

Pull both control levers as far as they will go in the direction indicated in figure 17 and hold them in place for approximately 3 seconds.

The LEDs on the quadcopter will flash rapidly.

Hold the control levers in the indicated position until calibration is complete (the LEDs on the model will stay constant).

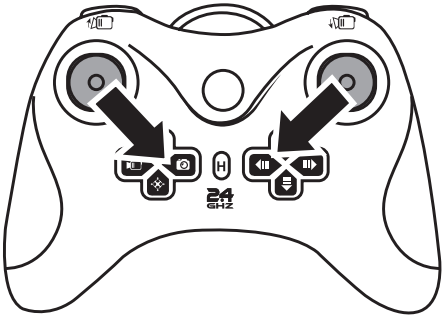

Figure 17

15. Starting the rotors and automatic landing

Warning!

Remove all obstacles surrounding the quadcopter before starting the rotors. The rotors must only be started in large rooms/halls or outdoors.

For safety reasons, people/animals and objects must be at least 2 meters from the take-off position, otherwise the quadcopter may be damaged or may cause injury or damage to property!

The automatic landing feature is a preprogrammed sequence. Before you press the automatic landing button, the model must be in a stable position (hovering) in order to ensure a safe, automatic landing. Ideally, the quadcopter's altitude should not exceed 1.5 m and the landing position should be at least 2 m from obstacles and people/animals.

If this is not the case, the quadcopter may be damaged or may cause injury or damage to property!

The rotors are started with a button (figure 7, position 5). This button is also used to initiate an automatic landing.

Place the quadcopter on a level surface and ensure that it is at a sufficient distance from the pilot and obstacles (see instructions above).

To start the quadcopter, press the "Start rotors/automatic landing" button (figure 7, position 5) on the remote control. The rotors will start to turn.

Carefully push the left-hand lever (figure 7, position 4) on the remote control forwards until the model takes off. The quadcopter should move upwards in a vertical line.

Hover the quadcopter at a height of approximately 1 - 1.5 m. You can now control the quadcopter using the control levers on the remote control.

To land the quadcopter, choose a suitable landing site (see instructions above) and ensure that the quadcopter is hovering in a stable position at a height of max. 1.5 m.

Press the "Start rotors/automatic landing" button (figure 7, position 5) on the remote control. The model will start to drop vertically and the rotors will switch off automatically after landing. You can use the remote control to correct the direction of travel.

16. Flight movements

After take-off, the quadcopter will start to hover provided that the controls have been trimmed correctly. To make the quadcopter ascend, carefully push the left-hand lever on the remote control forwards. Return the left-hand lever to the neutral position to stop the ascent. To make the quadcopter descend, carefully pull the left-hand lever on the remote control downwards. Return the left-hand lever to the neutral position to stop the descent.

Move the left-hand lever to the left to make the quadcopter rotate to the left about the vertical axis. Turn the lever to the right to make the quadcopter rotate to the right.

Carefully push the right-hand lever forwards to make the quadcopter move forwards, or pull the lever backwards to make the quadcopter move backwards.

Move the right-hand lever to the left to make the quadcopter move to the left. Move the right-hand lever to the right to make the quadcopter move to the right.

⟶ For more information on controlling the quadcopter, refer to the instructions in section 11.

17. Headless mode

In headless mode, the quadcopter always moves in the direction of the remote control levers, regardless of its orientation. For example, when you move the control lever to the right, the quadcopter will always move to the right (regardless of which direction the quadcopter is facing). In this mode, you can move the right-hand lever (pitch and roll) in the direction in which you wish the quadcopter to travel.

Important!

The remote control and quadcopter must be aligned when headless mode is enabled. Headless mode can therefore only be enabled when the quadcopter is on the ground. The quadcopter should be aligned so that the (green) LEDs are on the back of the quadcopter. If you fail to observe these instructions, the quadcopter may not respond as expected and may travel in a different direction.

Headless mode is controlled using relatively simple technology (without a compass or GPS). As a result, it is normal for the quadcopter to deviate from the desired direction of travel.

When the quadcopter is not in headless mode, you need to consider the orientation of the quadcopter (e.g. the quadcopter is travelling towards you and you move the lever to the left, but the quadcopter moves to the right). In headless mode, you do not need to consider the orientation, which makes the quadcopter easier to control for beginners. However, if you wish to learn how to fly a quadcopter in the standard configuration, you should avoid using headless mode and learn how to fly the quadcopter in the standard mode.

To enable headless mode, pair the remote control with the quadcopter (prepare the quadcopter for take-off). The rotors are still off when headless mode is enabled for the first time. Align the quadcopter on the ground so that the remote control points towards the green LEDs on the back of the quadcopter (see figure 18).

Press the "headless mode" button (figure 7, position 8) until you hear two beeps.

The LEDs on the quadcopter will flash rapidly to indicate that headless mode is enabled.

Start the quadcopter.

When headless mode is enabled, the quadcopter will always move in the direction of the right-hand lever (regardless of the quadcopter's orientation). For example, when you move the lever forwards, the quadcopter will always move away from you. When you move the lever to the right, the quadcopter will always move to the right.

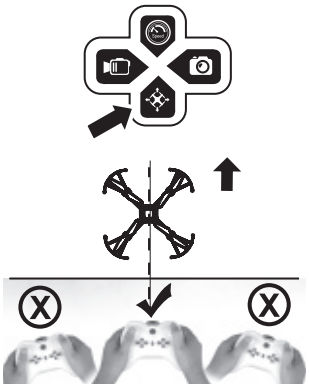

Figure 18

To disable headless mode, press the headless mode button (figure 7, position 8) until you hear a beep. The LEDs on the quadcopter will stop flashing to indicate that headless mode is disabled.

18. Image and video recordings

a) General information

The quadcopter comes with a camera that can be rotated wirelessly by 90°. You can use the remote control or a smartphone app to take photos, record video and control the camera.

When the camera is controlled with the remote control, images and videos are stored on a microSD card (not included). When controlled with a smartphone app, the images and videos are stored on your smartphone (and to a microSD card, if inserted).

b) Inserting a microSD card

⟶ Refer to the technical data at the end of these instructions for a list of supported microSD cards/technical requirements.

Insert the microSD card so that the contacts on the card face downwards. We recommend that you remove the landing gear before inserting the card.

Carefully insert the microSD card into the slot until it clicks into place. To remove the microSD card, carefully push it into the card slot until it clicks out of place. We recommend that you remove the landing gear before removing the card.

You can use a compatible card reader to transfer and back up images and videos on the memory card to your computer.

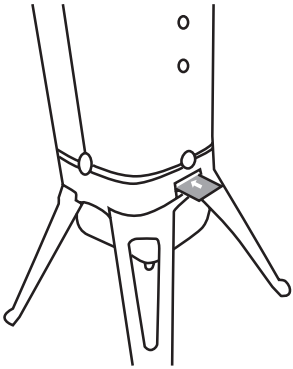

Figure 19

c) Image and video recordings

Move the camera to the desired position using the camera control buttons on the remote control. Use the left-hand button (figure 7, position 2) to move the camera upwards, or the right-hand button (figure 7, position 3) to move the camera downwards. The camera can be moved at an angle of up to 90°. In the smartphone app, the icons for controlling the camera are displayed on the left-hand side of the screen.

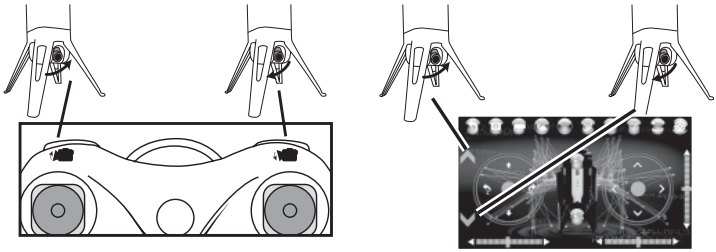

Figure 20

To take a photo, press the button with the photo symbol on the remote control (figure 21, left-hand arrow). The image will be saved to the microSD card in "JPG" format.

To start a video recording, press the button with the video symbol (figure 21, right-hand arrow). Press the button again to stop the recording.

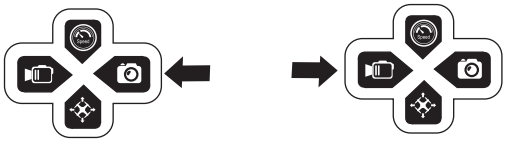

Figure 21

19. FPV mode

a) General information

The quadcopter comes with a camera that can transmit live video wirelessly to a compatible smartphone (not included). You can install an app on your smartphone to take photos, record video and control the camera. Images and video can be saved to your smartphone or a microSD card (not included, must be purchased separately) in the quadcopter. You can then edit the images/videos as desired.

The live video transmission enables you to use the quadcopter in "FPV mode" ("FPV" = First person view).

Warning!

Using the quadcopter in FPV mode increases the risk of an accident, as there may be obstacles that are not displayed in the camera image. In FPV mode, the quadcopter must be observed by a co-pilot who can warn you about potential hazards.

Flying the quadcopter in FPV mode requires lots of practice. When practising, ensure that there are no obstacles, people, animals, buildings and streets in the surroundings.

To prevent interference when the camera is transmitting video signals, ensure that there are no other remote controls within range of the quadcopter that operate on the 2.4 GHz frequency. Ensure that Bluetooth® is disabled on your smartphone.

You can also use FPV mode when the quadcopter is controlled via a smartphone. However, the area of the camera image is significantly reduced by the onscreen icons and your fingers. As a result, we recommend that you only use FPV mode with the remote control.

b) Downloading the app

A smartphone app is required to use FPV mode. The app is free and you will not incur any additional costs other than those that you would normally incur for downloads.

Depending on your operating system, scan one of the QR codes below (iOS or Android). You will be automatically directed to the download page for the current version of the app. Alternatively, search for the "Rocket Drone" app from REELY in the App Store (Apple devices) or Google Play Store (Android devices).

Figure 22: iOS

Figure 23: Android

c) Preparing the quadcopter for take-off

Prepare the quadcopter for take-off by pairing it with the remote control. The quadcopter will emit a Wi-Fi signal (similar to a Wi-Fi router).

On your smartphone, go to "Settings" and enable Wi-Fi. Search for the "Foldable Drone_xxxxx" network (xxxxx = number/letter combination) from the list of available Wi-Fi networks. This network is generated by the quadcopter and must be connected your smartphone. When you have connected the quadcopter to your smartphone, exit your smartphone settings and open the "Rocket Drone" app.

d) App functions

Figure 24 shows the app home screen (the home screen may differ on newer versions of the app). There are three options:

Question mark = Help function (1)

Cog symbol = Settings (2)

Play symbol = Start the app (3)

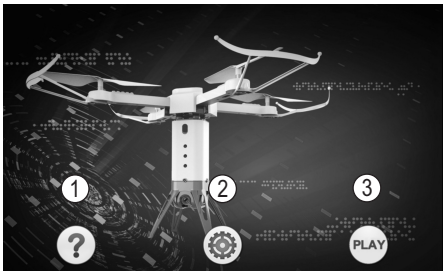

Figure 24

Question mark = Help function (1)

If you do not have access to the instruction manual, you can touch the question mark to view usage instructions. Touch the icon in the upper-left corner to exit the help menu.

Cog symbol = Settings (2)

You can use the cog symbol (2) to configure the following settings:

- **"Parameters auto save":**

  Automatically save images and videos (recommended).

- **"Reset the parameters":**

  Restore the app to the factory settings.

- "Right hand mode": Use this function to switch from mode II to mode I (=right hand mode). This switches the motor controls from left to right and the pitch controls from right to left. The roll and yaw functions stay in the original position and do not change.

- **"720P preview":**

  When "720 preview" is enabled, images and videos are saved at the highest possible resolution. This requires more memory and processing power. In addition, Wi-Fi technology places limits on this function. In FPV mode, stripes may appear in images and/or image transmission may be stuttered and delayed. This feature is only recommended when you only wish to record images or videos. We recommend that you disable this feature when using the quadcopter in FPV mode or when you encounter issues with image transmission.

Play symbol = Start the app (3)

Select "Play" (3) to access the following interface:

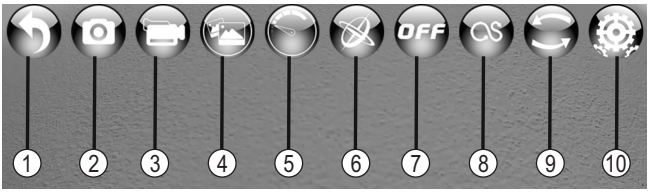

Figure 25

These icons have the following functions:

1 Exit the current screen

2 Take a photo with the quadcopter camera

3 Record a video with the quadcopter camera

4 View saved images and videos

5 Select the flight mode (first level = beginner mode, second level = advanced mode, third mode = professional mode, see section 11. e).

6 "Gravity sensor mode": Controls the quadcopter with the position sensors on your smartphone; only available when the control icons are shown.

7 "OFF"/"ON": Display or hide the control icons (for starting rotors/landing, rotor emergency stop, control icons for the rotor speed, yaw, roll, pitch and trimming).

8 Flight route: The quadcopter automatically flies in the shape (e.g. circle) or route indicated on the display.

Warning!

When using automatic flight mode, the quadcopter must not be surrounded by any obstacles. This feature is therefore only suitable or use in large rooms/halls or outdoors. People and objects must be at least 10 m away from the take-off position.

The automatic flight route feature is a preprogrammed sequence and requires the quadcopter to be in a stable position (hovering). Ideally, the quadcopter's altitude should not exceed 1.5 m and the route should be at least 10 m from obstacles and people.

If this is not the case, the quadcopter may be damaged or may cause injury or damage to property!

9 Rotates the camera image by 180°

10 Display/hide the icons for "VR mode" and "calibration" – see instructions on the next page.

When you select the cog icon (see figure 25, position 10), the following additional icons are displayed:

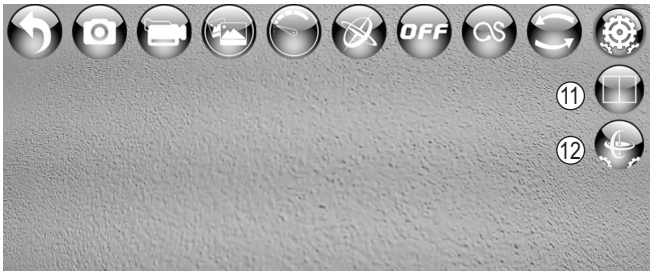

Figure 26

11 "VR" setting for a live 3D image (requires a VR headset).

12 Calibration (calibrates the sensors in the quadcopter, see section 14)

e) Using the app

A live image of the quadcopter camera will be displayed when the quadcopter is ready for take-off and you have enabled the app with the "Play" icon. You can then start the quadcopter with the remote control and – if desired – fly the quadcopter in FPV mode using the camera image. In this configuration, the quadcopter is controlled with the remote control.

To take a photo or record a video with the quadcopter camera, touch the corresponding icon on your smartphone display (see figure 25, positions 2 and 3).

⟶ Continuous shooting is not possible. Touch icon #2 to enable the camera, and release the icon to take a photo. Touch #3 to end a video recording.

A stopwatch is displayed during video recordings to indicate the recording duration. To end a recording, touch the icon in figure 25, position 3. The recording will stop, the stopwatch will disappear and the recording will be saved.

You can also take a photo during video recordings.

f) Viewing images or videos

When you have finished flying the quadcopter, you can view images and videos on your smartphone. Touch the corresponding icon on the display (figure 25, position 4). A new screen will be displayed.

Select "Pictures" or "Video". Another screen with the recorded images/videos will be displayed. Touch the desired file to view the corresponding image/video. To delete an image/video, select the corresponding file (touch and hold) and follow on the onscreen prompts.

g) Saving images or videos to the microSD card

⟶ Refer to the technical data at the end of these instructions for a list of supported microSD cards/technical requirements.

The quadcopter features a microSD card slot under the battery compartment cover. The images and videos that you save to your smartphone can be also be saved to a microSD card (not included, must be purchased separately).

Insert the microSD card so that the contacts on the card face downwards. Carefully slide the microSD card into the card slot until the card clicks into place. To remove/change the microSD card, carefully slide the card into the card slot until it clicks out of place.

You can use a compatible card reader to transfer and back up images and videos on the memory card to your computer.

20. Controlling the quadcopter with your smartphone

The "Rocket Drone FPV" quadcopter can be controlled with a smartphone instead of the remote control. There are two possibilities that are displayed in sequence. To prevent interference with the transmission of flight commands and video signals, ensure that there are no other remote controls within range of the quadcopter that operate on the 2.4 GHz frequency. Ensure that Bluetooth® is disabled on your smartphone.

Compared with the remote control, the quadcopter responds more slowly and less precisely to smartphone commands. When controlling the quadcopter with a smartphone, be patient and ensure that there are no obstacles in the surroundings.

The maximum range of the smartphone remote control is significantly shorter than the standalone remote control (see "Technical data").

a) Controlling the quadcopter with the app icons

When you start the app, a number of icons are displayed with the camera image. In addition to the camera control icons (see figure 25, position 2 - 4), the remote control icons are displayed when you select the icon in figure 25, position 7.

After you select this icon, the "Start rotors/automatic landing" (figure 27, position 13) button and "Emergency rotor stop" (figure 27, position 14) buttons will be displayed. Touch the "Emergency rotor stop" icon to immediately switch off the rotors, e.g. if the rotors are blocked due to an unsuccessful landing.

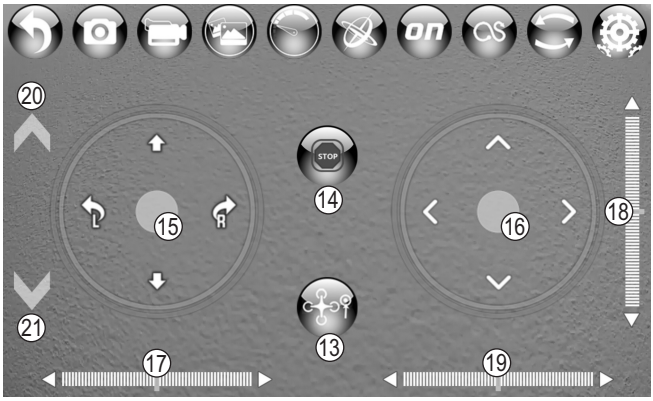

Figure 27

The left-hand control icon (figure 27, position 15) controls the altitude and rotation about the vertical axis (yaw). The right-hand control icon (figure 27, position 16) controls the pitch and roll.

The "yaw" trim icon is shown in figure 27, position 17. Position 18 is the trim icon for "pitch", and position 19 is the trim icon for "roll". If necessary, touch the left or right-hand arrow to trim the "yaw" and roll" and the up or down arrow to trim the "pitch" until the quadcopter responds as desired. Refer to sections 13 and 14 for more information on how to trim the quadcopter.

To control the quadcopter with your smartphone and in-app controls, follow the steps below:

- Switch the quadcopter on. The LEDs in the outrigger arms will start to flash and the quadcopter will emit a Wi-Fi signal.
- Switch on your smartphone. Go to "Settings/Wi-Fi" and connect your smartphone to the quadcopter's Wi-Fi network.
- Open the "Rocket Drone" app on your smartphone.
- Select "Play". The in-app control icons will be displayed (see figure 25) together with the video image from the built-in camera.
- Place the quadcopter in a suitable take-off position. Refer to the instructions in sections 11 and 12.
- Select the icon in figure 25, position 7. The control icons (which correspond to the control levers on the remote control) will appear as "points". The trim controls will also be displayed.
- The LEDs on the outrigger arm should now be constant. This indicates that the quadcopter is connected to the app.
- Select the icon in figure 26, position 13. The rotors will start to turn.
- Move the left-hand control icon (figure 27, position 15) forwards slightly. The quadcopter will take off and hover approximately 1.5 above the ground.
- The two control icons (see figure 27, positions 15 and 16) function like the control levers on the remote control. Keep your smartphone in your hands. Touch each "point" with your finger (for best results, use your thumb) and control the quadcopter in the same way as you would with the remote control (see section 11 and 12).
- To land the quadcopter, move the left-hand control icon (figure 27, position 15) backwards slightly. Alternatively, initiate an automatic landing by selecting the icon in figure 27 (position 13). To switch off the rotors in the event of an unsuccessful landing, select the icon in figure 27 (position 14). This switches the rotors off immediately.
- To move the camera upwards, touch the icon in figure 27 (position 20). To move the camera downwards, use the icon in figure 27 (position 21).

b) Other in-app controls

By default (see icon in figure 25, position 5), the app is set to 30% of the maximum steering range. This corresponds to beginner mode (see section 11) and restricts the impact of steering commands.

An additional bar is displayed when you touch this icon again (figure 25, position 5). The steering range is now set to approximately 60 % of the maximum. This corresponds to advanced mode, which makes the quadcopter more agile.

A third bar is displayed when when you touch the icon again (figure 25, position 5). The steering range is now set to 100 % of the maximum. This corresponds to professional mode, which does not restrict the control functions. Touch the icon again to revert to the first level (30 %).

Touch the icon in figure 25 (position 8) to enable "flight route" mode. The left-hand control icon will continue to be displayed and can be used to control the altitude and yaw. The right-hand control icon is not available in this mode.

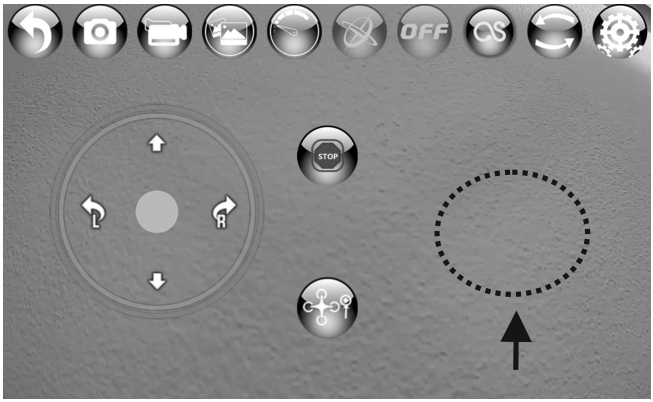

Figure 28

You can use this space to draw a flight path (e.g. a circle, see arrow in figure 28). The quadcopter will automatically follow the designated route.

Bring the quadcopter into a stable position and enable flight route mode (touch icon in figure 25, position 8). Draw a route on the display. When you have finished drawing a route (lift your finger from the display), the quadcopter will immediately follow the designated route.

Warning!

When using automatic flight mode, the quadcopter must not be surrounded by any obstacles. This feature is therefore only suitable or use in large rooms/halls or outdoors. People and objects must be at least 10 m away from the take-off position.

The automatic flight route feature is a preprogrammed sequence and requires the quadcopter to be in a stable position (hovering). Ideally, the quadcopter's altitude should not exceed 1.5 m and the route should be at least 10 m from obstacles and people.

If this is not the case, the quadcopter may be damaged or may cause injury or damage to property!

Touch the "REV" icon (figure 25, position 9) to invert the video image by 180° (the image will turn upside down).

Touch the cog icon (figure 25, position 10) to display additional control icons.

The "VR" icon (figure 26, position 11) activates a "quasi 3D mode". The live image from the camera is split into two parts on your smartphone screen. This allows you to connect your smartphone to a 3D headset (not included, must be purchased separately) and use FPV mode in 3D (i.e. with spatial perception). Enable 3D mode in the app (figure 26, position 11) and insert your smartphone into the 3D headset. Wear the 3D headset and start the quadcopter.

If the trim controls are not sufficient to prevent the quadcopter from drifting or responding abnormally, the sensors must be recalibrated. Place the quadcopter on a stable, level surface and touch the calibration icon (figure 26, position 12). The LEDs in the outrigger arms will start to flash. The LEDs will stay constant when calibration is complete.

c) Controlling the quadcopter with your smartphone's position sensors

Smartphones contain position sensors, which are used to detect the orientation of the device and rotate the display. These sensors can also be used to control the quadcopter's "pitch" (forwards and backwards) and "roll" functions (left and right).

To control the quadcopter with your smartphone's position sensors, follow the instructions in section 20. a) to prepare the quadcopter for take-off, and then select the icon in position 6, figure 25 to activate position sensor control.

Keep your smartphone horizontally in your hands. Watch the right-hand control icon (right-hand "point", see figure 27, position 16), which moves according to the orientation of your smartphone. Touch the "Start rotors/automatic landing" icon (figure 27, position 13) to start the quadcopter, and then touch the left-hand control icon (figure 27, position 15) to initiate the take-off. The quadcopter will take off and hover in front of you.

Use the left-hand control icon (figure 27, position 15) to control the altitude and rotation about the vertical axis. The smartphone's position sensors are used to control the left/right and forwards/backwards movement (instead of the right-hand control icon).

Tilt your smartphone forwards to make the quadcopter move forwards. Tilt your smartphone backwards to make the quadcopter stop or move backwards. Tilt your smartphone to the left to make the quadcopter move to the left. The quadcopter will move in the same direction as your phone.

21. Maintenance, servicing and repairs

a) Regular cleaning

The "Rocket Drone FPV" quadcopter has a very simple design. There are no mechanical parts that require lubrication or other maintenance. However, the quadcopter should be cleaned after each use to remove any dirt (e.g. woollen threads, hairs and dust).

Clean the quadcopter with a dry or slightly damp cloth and do not allow the electronic components, battery or motors to come into contact with water.

b) Replacing the rotors

Rotors that are damaged by a crash or other impact should be replaced immediately. This also applies in the event that there are small cracks. Due to the high speed of rotation, components on damaged rotors may become loose and damage the surroundings.

To change a rotor, carefully remove the screw on the motor shaft. Carefully remove the defective rotor and attach the new rotor. Ensure that the rotor rotates in the same direction as the motors (see markings on rotor and outrigger arm). New rotors must be fixed in place with a screw. Proceed with caution and do not apply excessive force.

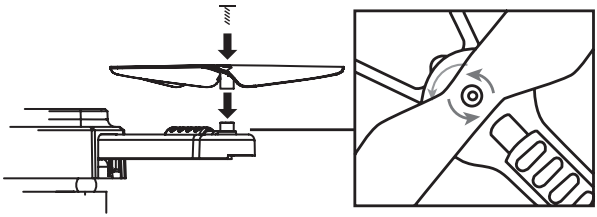

Figure 29

Warning!

Pay attention to the motor's direction of rotation (see markings on outrigger arm) and ensure that the rotor is attached in the corresponding orientation (see markings on rotor). If the rotor is attached in the wrong orientation, the quadcopter will not function properly after take-off and the guarantee/warranty will no longer be valid!

22. Disposal

a) Product

Electronic devices are recyclable waste and must not be placed in household waste. Always dispose of the product according to the relevant statutory regulations.

Remove any inserted batteries and dispose of them separately from the product.

b) Batteries

You are required by law to return all used batteries (Battery Directive). They must not be placed in household waste.

Batteries containing harmful chemicals are labelled with this symbol to indicate that disposal in household waste is forbidden. The abbreviations for heavy metals in batteries are: Cd = Cadmium, Hg = Mercury, Pb = Lead (indicated on the battery, e.g. below the waste bin icon on the left).

Used batteries can be returned to local collection points, our stores or battery retailers.

You thus fulfil your statutory obligations and contribute to protection of the environment.

23. Declaration of Conformity (DOC)

Conrad Electronic SE, Klaus-Conrad-Straße 1, D-92240 Hirschau, hereby declares that this product conforms to the 2014/53/EU Directive.

⟶ Click on the following link to read the full text of the EU Declaration of Conformity:

www.conrad.com/downloads

Select a language by clicking on the corresponding flag symbol and then enter the product order number in the search box. The EU Declaration of Conformity is available for download in PDF format.

24. Technical data

a) Remote control

Transmission frequency.....2,402 - 2,450 GHz
Transmission power.....2 dBm
Range.....Max. 50 - 70 m (with no obstructions)
Operating voltage.....6 V/DC (4 AA batteries)
Dimensions (W x L x H).....150 x 110 x 64 mm
Weight.....Approx. 255 g (with batteries and smartphone holder)

b) Quadcopter

Transmission frequency (Wi-Fi).....2,402 - 2,450 GHz
Transmission power (Wi-Fi).....13 - 15 dBm
Range (Wi-Fi).....Approx. 25 - 30 m (with no obstructions)
Flight time.....Approx. 4 - 5 minutes
Height (folded).....180 mm
Length (folded).....92 mm
Width (folded).....92 mm
Height (unfolded).....180 mm
Length (unfolded).....300 mm
Width (unfolded).....300 mm
Rotor diameter.....135 mm
Total diameter.....355 mm
Take-off weight.....Approx. 170 g

c) Camera

Camera resolution.....0,9 MP
Resolution (Image and video).....1280 x 720 pixels
Refresh rate.....25 fps
Image angle.....120°
Swivel range.....90° (up/down)
Video format.....AVI
Image format.....JPG

d) Rechargeable battery

Rated voltage .....3.7 V (LiPo 1S)
Capacity.....900 mAh
Discharge rate 25C
Connector system.....BEC

e) USB battery charger

Operating voltage .....5 V/DC (via USB)
Required input current.....min. 1000 mA
End-of-charge voltage .....4.2 V (LiPo 1S)
Charging time .....Approx. 30 minutes

f) General information

Permissible usage locations.....In buildings and outdoors in calm weather
Temperature range .....0 °C to +40 °C
Humidity.....max. 75 % relative humidity, non-condensing
App .....Android 4.0 / iOS 7.1 or later
Storage medium .....MicroSD, max. 64 GByte
Storage medium class .....Class 4 or higher

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