df models DF 100 PRO FPV Helicopter With FPV Camera Instruction Manual

Manual Instruction

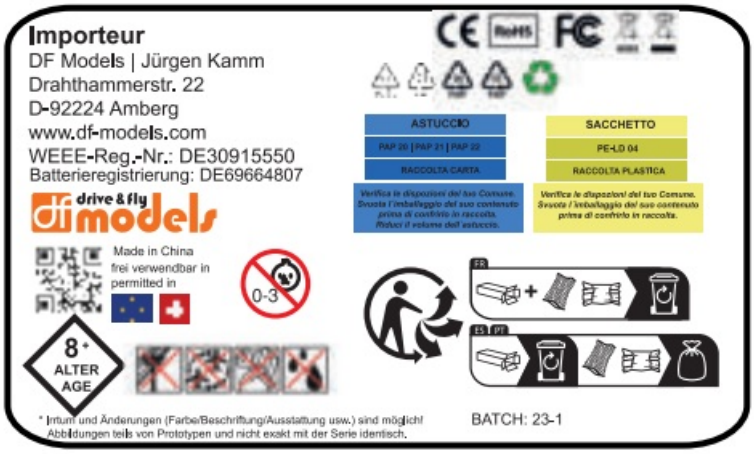
Contents

DF 100 PRO FPV Helicopter With FPV Camera

** Smartphone NICHT im Lieferumfang!*

Service Hotline:

Sehr geehrter Kunde, sehr geehrte Kundin, haben Sie technische Probleme, eine Frage zum Modell oder dessen Handhabung usw. kontaktieren Sie uns bate!
www.df-models.com info@df-models.com Service-Telefon: +49 (0) 9621 782 293



Introductory remarks

Congratulations on your purchase of a product from DF Models | MALi Racing.
All products are carefully checked for completeness and function to ensure that the product is free of manufacturing and material defects. The product is EMC-tested and meets the requirements of the applicable European and national directives. Due to constant further development and improvement of our products, we reserve the right to make technical changes and changes in equipment and design without prior notice. Therefore, no claims can be made on the basis of minor deviations of the product you have from the data and illustrations in these instructions. The responsible handling of the product is for your own safety and the safety of persons not involved. Please observe the safety instructions in this manual. Subject to technical and colour changes.

warranty/guarantee conditions

The operating instructions for this product are a basic component of the product, as non-observance of the information contained therein on handling and operation and non-observance of the safety instructions invalidates the warranty/guarantee.
Therefore, keep the operating instructions in a safe place even if the product is passed on to third parties. The warranty period for consumers is 24 months. Unless otherwise provided by law, the warranty/guarantee is limited to repair at the cost of the purchase price, replacement of the product with an equivalent or refund of the purchase price.
A different assertion of other claims from country to country is conceivable.
The duration of the warranty/guarantee remains unaffected by repair and/or replacement of parts. We reserve the right to use refurbished or new parts. Services and repairs after the warranty/guarantee period have to be paid for.
The warranty/guarantee covers manufacturing and material faults and faults in normal use. Mechanically stressed parts are not covered by the warranty.
We assume no liability for consequential damages!
are excluded from the warranty/guarantee:
– Damage caused by non-observance of the safety instructions or the operating instructions
– Force majeure, collisions, incorrect handling
– extraordinary stress or external influence
– unauthorized modifications or repairs carried out by unauthorized persons
– damage caused by loss of control of the model
– Lightning strike or other influence of high voltage or current
– Wear parts, mechanically stressed parts and normal wear and tear, optical impairments

– Transport, shipping or insurance costs
– Costs for the proper disposal of the product as well as setup and readjustment work carried out by the service department

safety instructions

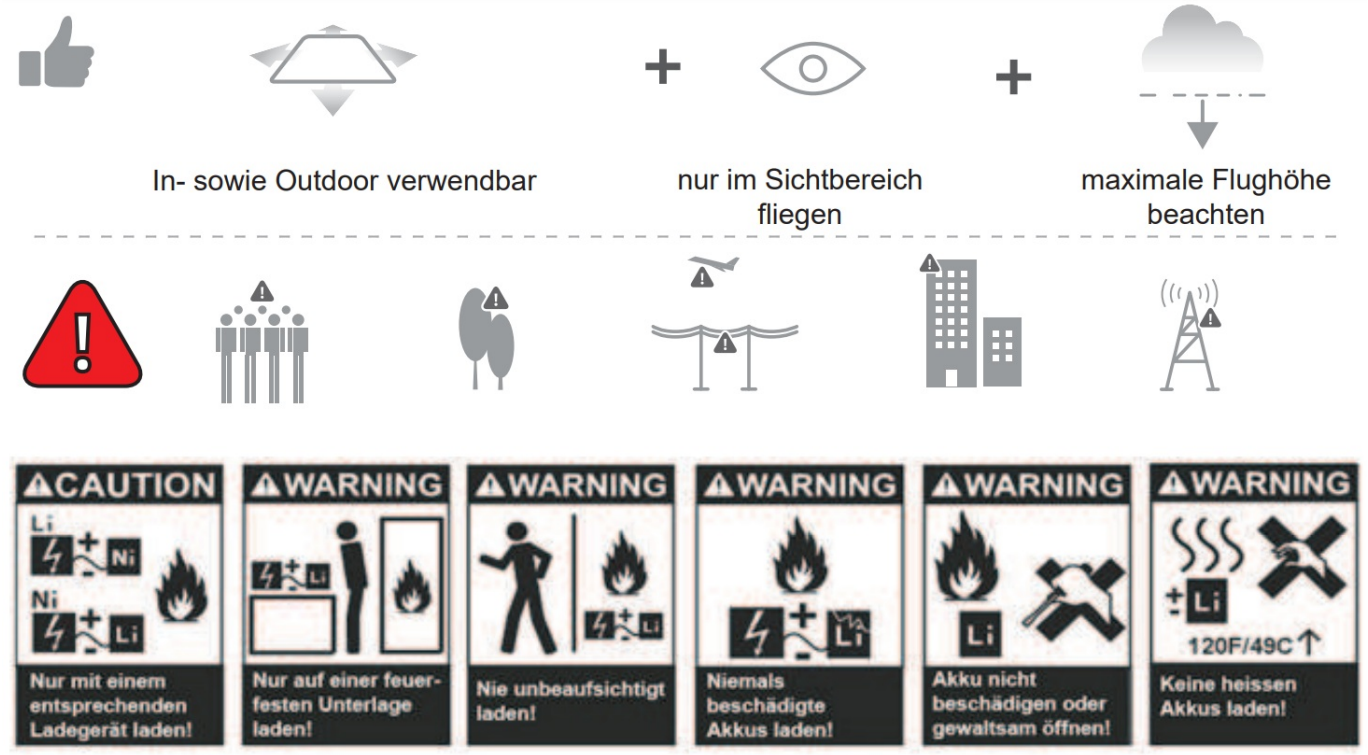
Use this product responsibly.
As manufacturer and distributor of the product, we have no direct influence on the correct handling and operation of the product.
The following safety instructions are intended to protect you and your environment from damage that may result from improper use. But also the product itself and your model should be protected against damage by the corresponding instructions.
Therefore, please read this chapter carefully before putting the product into operation! We accept no liability for damage to property or personal injury caused by non-observance of the operating instructions or the safety instructions. In such cases, the warranty/guarantee also expires. We assume no liability for consequential damages! Not suitable for children under 36 months. Contains small parts – danger of suffocation! The product is suitable for children under 14 years only under direct supervision of an adult. Dispose of the packaging material properly, as it could be dangerous for children.

Before the start
Clarify with your insurance company whether the operation of a radio-controlled model is covered by insurance (liability insurance).
If you are not yet experienced in controlling RC models, first familiarise yourself with the reactions to the control commands on the standing model. If necessary, consult an experienced model athlete or a model building club. If necessary, seek the support of
an experienced pilot/driver.
Check the remote control system and the model for functional reliability and visible damage, such as defective plug connections or damaged cables, before putting it into operation. All moving parts must function smoothly, but without bearing play. Check all
screw and plug connections, wheel nuts and electrical contacts for tightness, as these can become loose or detached during transport, while driving or in the event of minor accidents. Fasten excess lengths of cables in such a way that they cannot get into moving/rotating parts. Cables must also not be kinked. Make sure that all batteries are fully charged and not damaged.
Driving/ Flying
Do not drive/fly if your reactions are restricted (e.g. if you are tired or under the influence of medication or alcohol). Incorrect reactions can cause serious personal injury and damage to property. Do not drive if you have the slightest doubt about the perfect technical condition of your model/remote control system. Always maintain direct visual contact with the model. Operate the model only on private property or in places designated for this purpose. Observe the conditions and regulations for the terrain.
When operating a model, always ensure that no parts of the body or objects in the danger zone of motors or rotating parts. Regularly check all screw connections and fastenings, as these can become loose or detached during operation. In the event of a malfunction, stop operation of your model immediately and eliminate the cause of the malfunction before continuing to use the model. Avoid driving in low outside temperatures, as this reduces the battery capacity and the plastic of the bodywork loses its elasticity and splinters easily. Do not expose your model and the remote control system to direct sunlight, moisture, heavy soiling or extreme heat/cold for long periods. Do not drive in crowded areas, towards people or animals, in nature reserves, at night, under power lines, radio masts or during thunderstorms. Electrical fields and atmospheric disturbances can affect the signals of your remote control transmitter, in rain or damp conditions, otherwise the electrical system will be damaged. Please note that RC models must not be driven on terrain where there is public transport.
Intended use
The product is designed exclusively for private use in the model building sector and with the associated operating times. This product is not approved for commercial or industrial use or for continuous operation. Improper use can lead to personal injury and damage to the product and the associated risks such as loss of control over the model, short circuit, fire, electric shock, etc.
Follow the safety instructions in this manual. They contain important information for handling the product. The product is suitable for children under 14 years of age only under adult supervision.

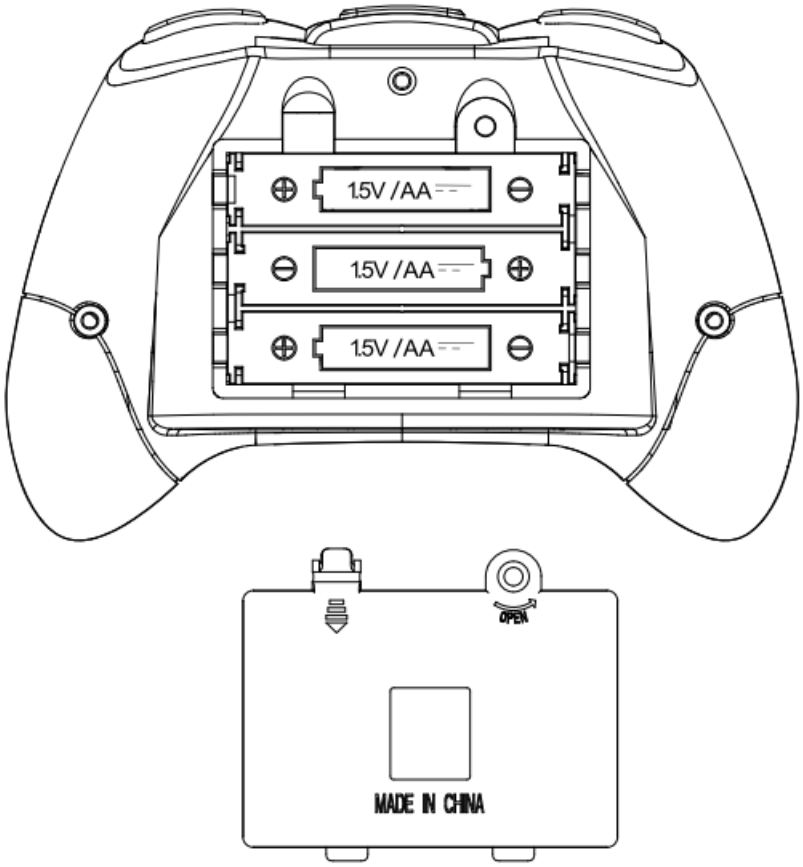
Notes for batteries and rechargeable batteries
Keep batteries out of the reach of children and pets as they may accidentally swallow the batteries. In this case, consult a doctor immediately!
Leaking or damaged batteries can cause burns if touched. If skin or eyes come into contact with the electrolyte, rinse immediately and thoroughly with clear water. and see a doctor. Use suitable protective gloves when disposing of the defective Batteries. If you notice any abnormal smell, discoloration, excessive heating or deformation of the battery, disconnect the battery from the charger or consumer immediately. Dispose of the battery!
Conventional alkaline batteries (1.5V) are intended for single use only and must then be disposed of properly. Dispose of empty batteries or defective rechargeable batteries in an environmentally friendly manner at authorised collection points. It is prohibited
to dispose of them with household waste!
Batteries must not become damp or wet. Also avoid the formation of condensation water. Never expose the batteries/rechargeable batteries, the charger and the model to adverse environmental conditions (e.g. wetness, excessively high or low ambient temperature, sources of ignition or open fire, dust, vapours, solvents)!
Avoid heavy soiling and excessive mechanical stress on the battery and never pull the connecting cables! Never mix batteries and rechargeable batteries at the same time in one device!
If no brand-new batteries are used to power the transmitter, ensure that there is sufficient residual capacity (battery tester).
Always replace the complete set of batteries, not just individual cells. Always use batteries of the same type and manufacturer.
Do not mix batteries with different charge levels. Make sure that the polarity is correct when inserting batteries into the battery holder. If the polarity is incorrect, not only your model but also the battery will be damaged. Batteries must never be short-circuited, damaged, disassembled or thrown into an open fire. There is a risk of fire and explosion!
If the battery gets hot, disconnect it from the charger immediately! If the model is not used for a longer period of time, remove the batteries or rechargeable batteries from the remote control and from the model in order to avoid damage from leaking / deeply discharged batteries.
Extinguishing media: In the event of a fire, it must be extinguished by water spray, carbon dioxide or extinguishing powder/foam.
The full water jet is not suitable for extinguishing. The use of a fire extinguisher with AVD extinguishing agent is particularly recommended.

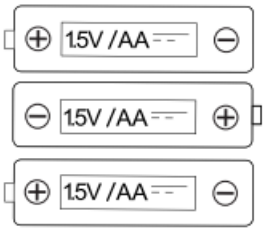
Disposal
At the end of its service life, dispose of the product in accordance with the applicable regulations. legal regulations (do not dispose of with household waste).

You as end user are legally obliged (battery regulation) to return all used batteries and accumulators.
disposal via household waste is prohibited! The adjacent symbols refer to the prohibition of disposal with household waste.
Batteries containing harmful substances are additionally marked with the designations for the decisive heavy metal: Cd=Cadmium, Hg=Mercury, Pb=Lead (the name appears on the battery/rechargeable battery, e.g. under the garbage can symbols shown on the
left).
You can return your used batteries/rechargeable batteries free of charge to the collection points in your municipality or wherever batteries/rechargeable batteries are sold. In doing so, you fulfil your legal obligations and make your contribution to environmental
protection.



Remote control

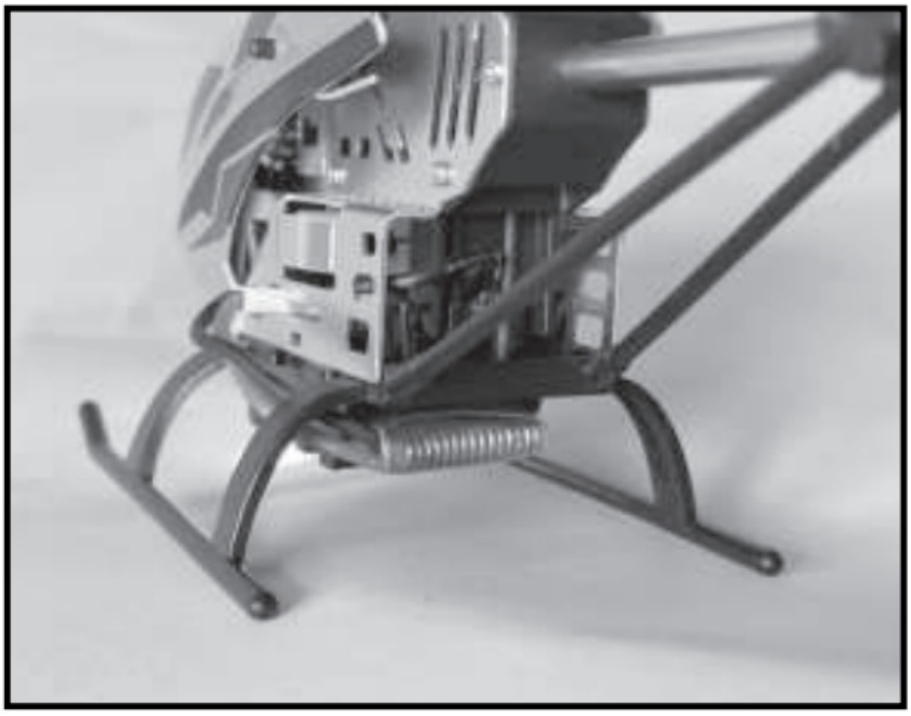




Inserting the transmitter batteries:
1. Unscrew the screw, open the 2. battery compartment Insert batteries (3x AA) (do not use rechargeable batteries!), pay attention to correct polarity!
Close battery compartment again If the model is not used for a long time, Remove batteries from transmitter!

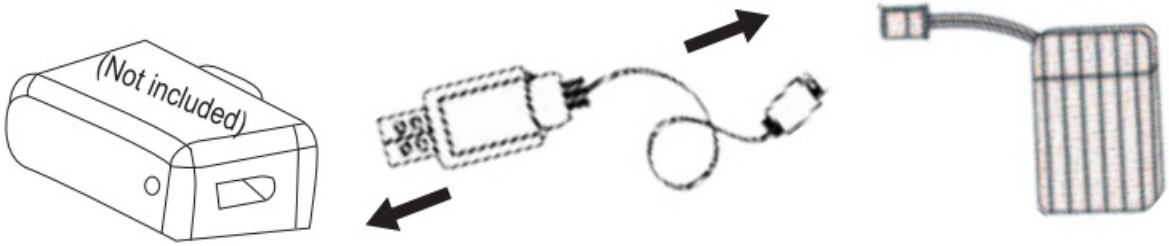
Insert battery

Insert the battery into the battery compartment on the underside of the copter (battery cable in flight direction left to rear).
Lead the cable through the runners and plug it into the socket (6) on the left side of the copter (make sure the polarity is correct!)
Always remove the battery from the model after flight!



If the model is not used ALWAYS disconnect the battery and remove it from the boat!

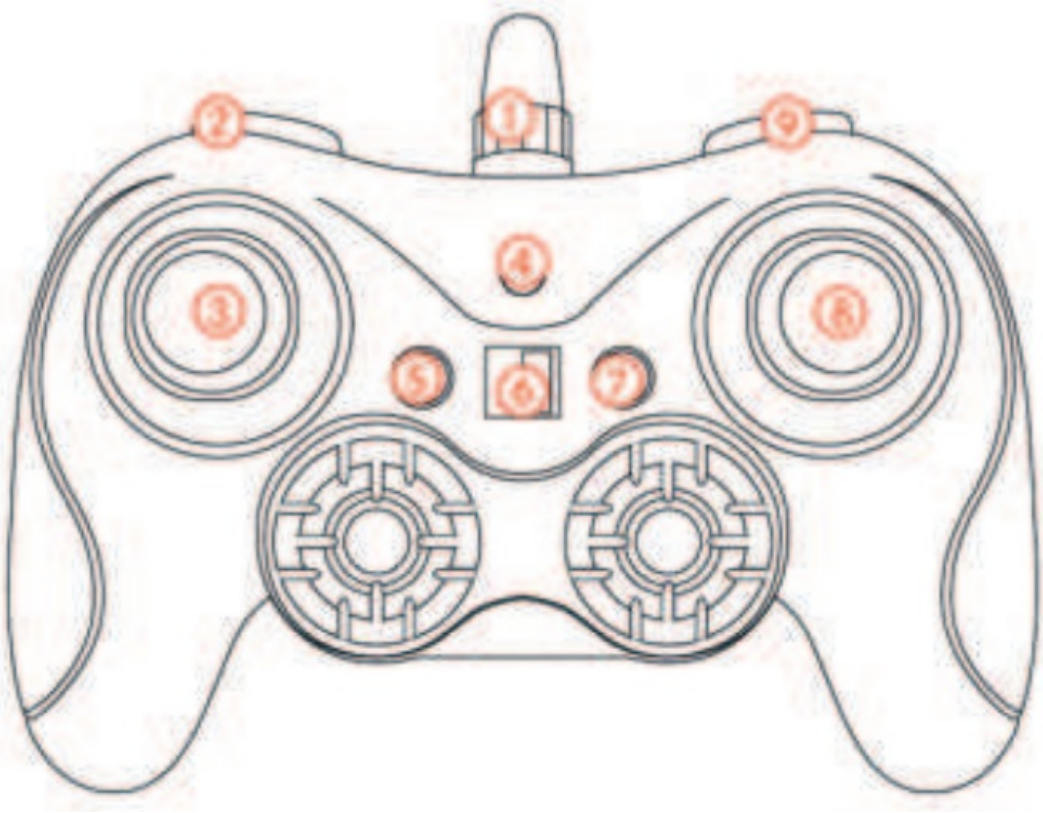
charging the flight battery



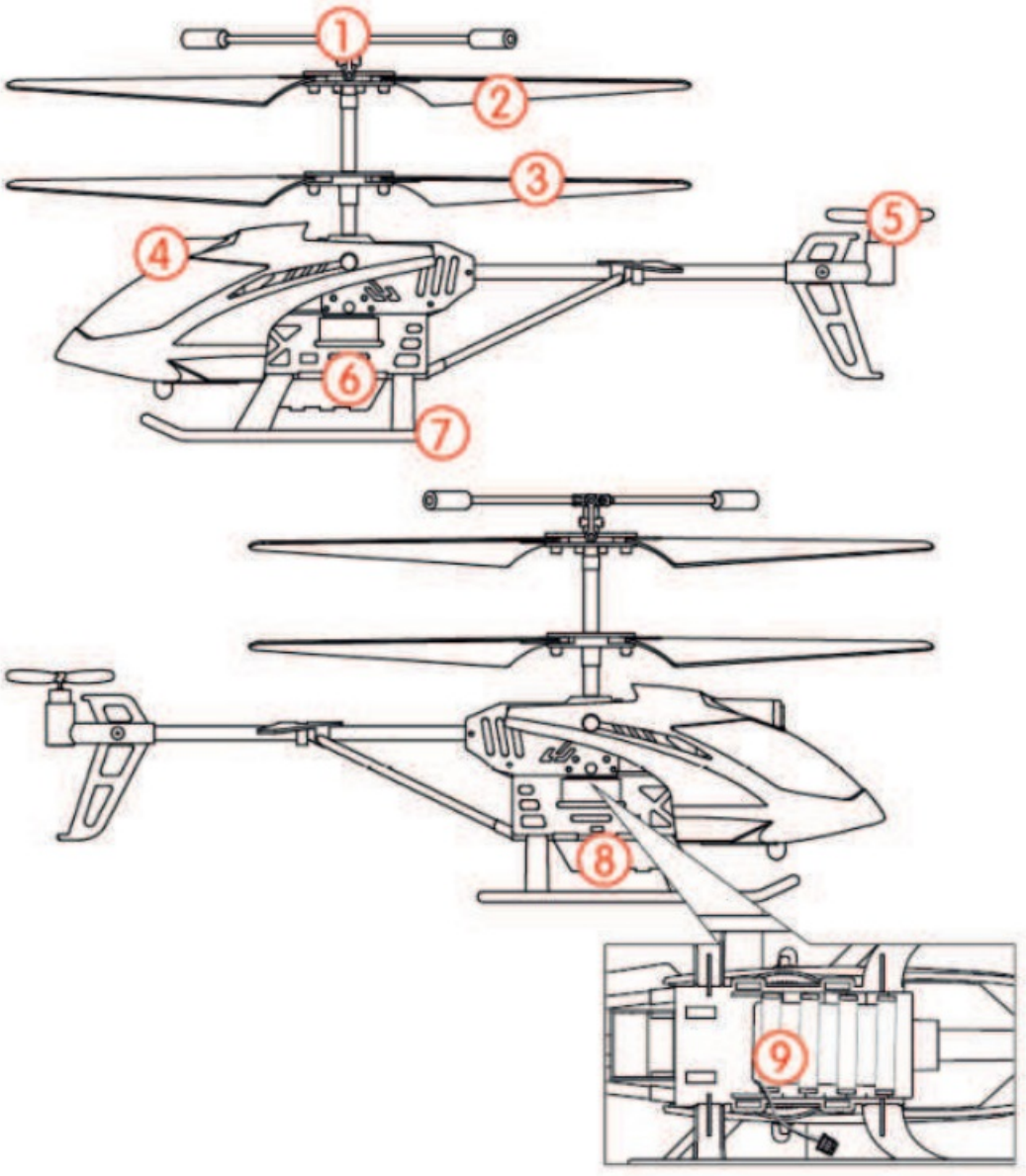
ALWAYS charge the battery outside the model, to avoid overheating during charging, always use a fireproof base!
Never disconnect the plug connection by pulling on the cables, always pull on the plug.

– Connect the charger (USB) to a suitable power supply (USB power supply unit, mobile phone adapter | not included).
– Now connect the battery with the USB charging cable – only use the enclosed charging cable!
– The LED lights up red, the battery is charging.
– The LED is off, the battery is fully charged.
– Disconnect the battery from the USB charging cable.
– Disconnect the USB charging cable from the power supply- Maximum charging time approx. 1-2 hours.
– NEVER charge unattended (e.g. “overnight”)!
– ALWAYS charge on a fireproof surface!
– Observe safety regulations!

Copter & transmitter

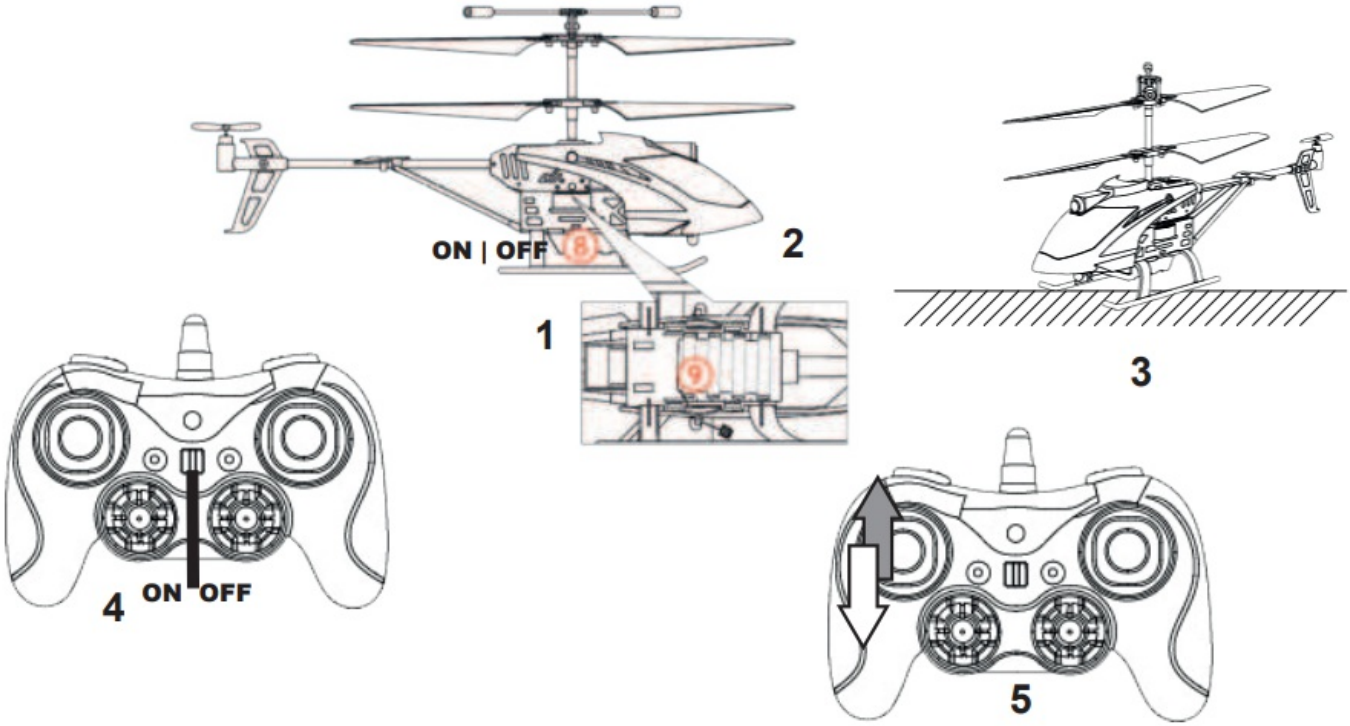


1. Antenna
2. Left trim
3. left joystick
4. Control lamp
5. Auto take-off & landing & emergency stop
6. On-Off switch
7. Lighting on/off
8. right joystick
9. Trim right



1. Flybar
2. Rotor blades – B
3. Rotor blades – A
4. FPV camera
5. Tail rotor
6. Battery connection
7. Landing gear
8. On/off switch
9. Battery / battery compartment

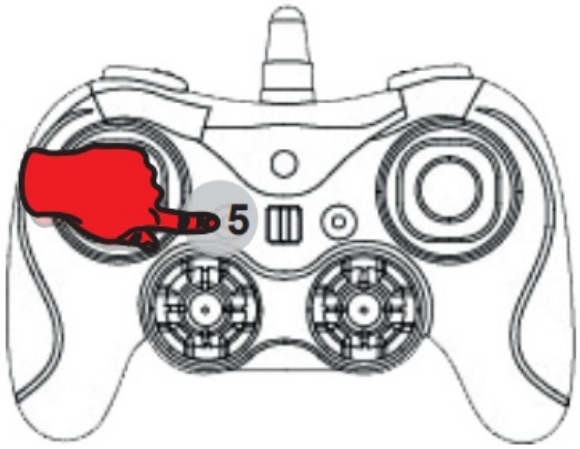
Start preparations



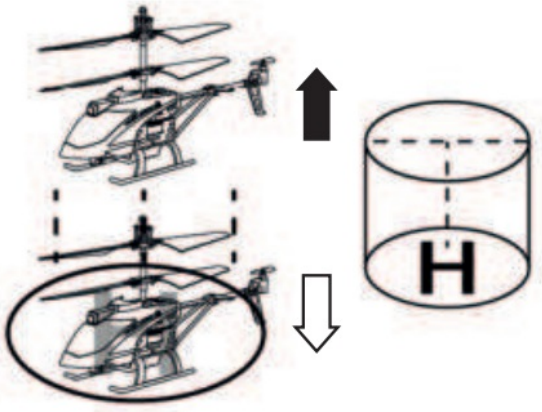
1. Insert the battery (9-battery/ compartment) and plug in
2. Turn ON/OFF switch on (8-switch), the LED flashes
3. Place copter horizontally
4. Switch on the transmitter
5. move the left control lever up and then down, the LED's are now constantly lit.

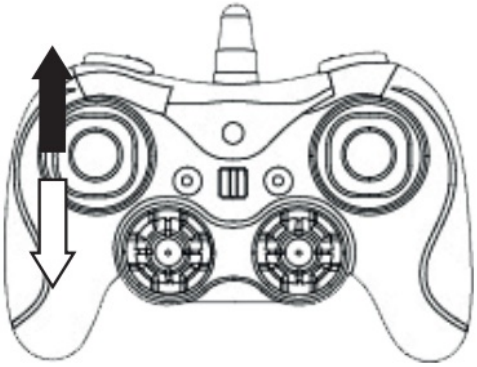
Perform a function and range check before every flight.
Operate the model only within visual range (max. 20-25M). Do not fly towards people or animals!

Flying

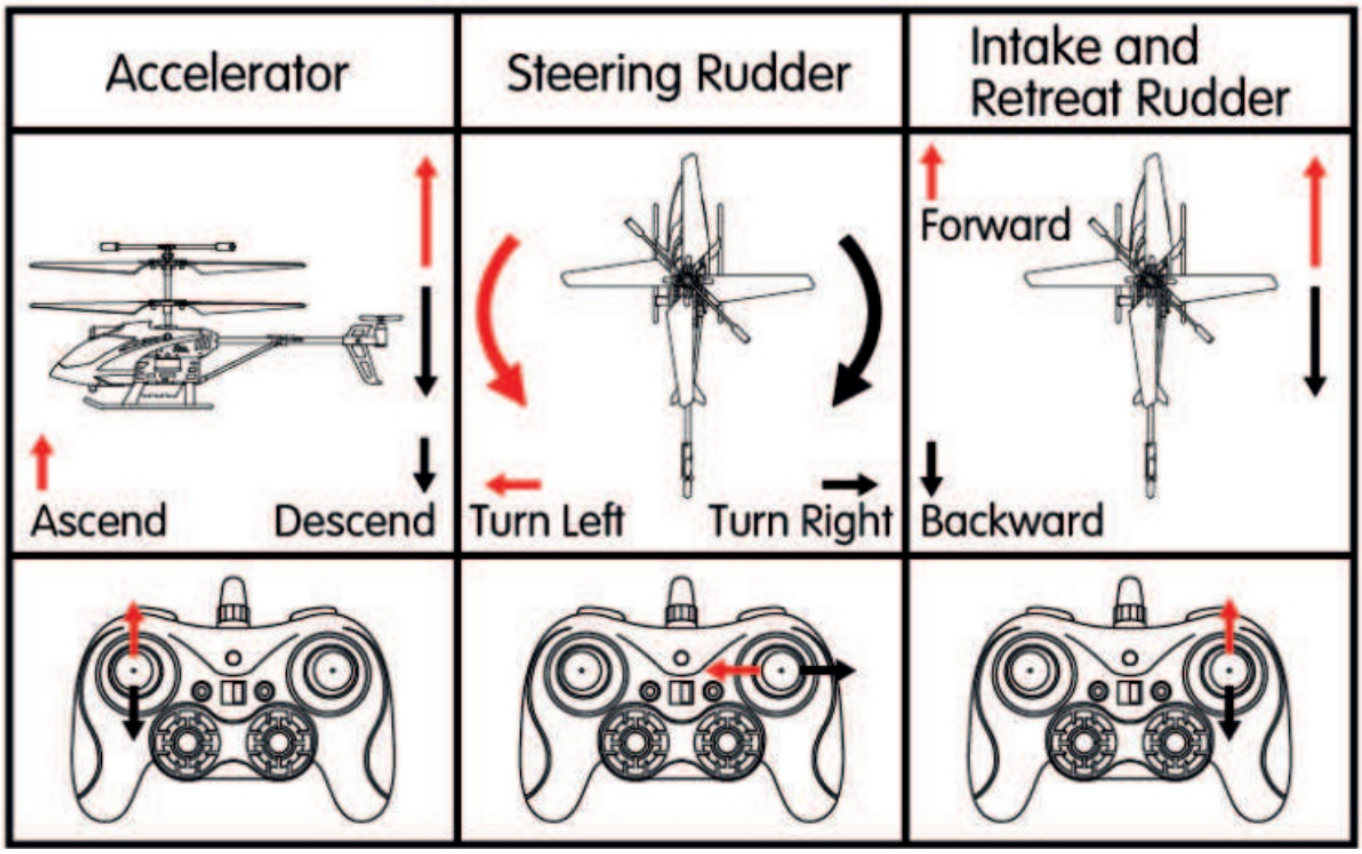


Takeoff and landing:
You have two options for takeoff/landing the model.
Method-1: Briefly press the start button "5", the engines now start running, the copter takes off and climbs to a height of approx. 1-2 meters. Now press the "5" button briefly to land the model, the model now starts to land automatically.
Method-2: Briefly press the start button "5", the engines now start to run and the copter takes off. To land, pull the left lever down and hold it until the model has landed and the engines stop running.





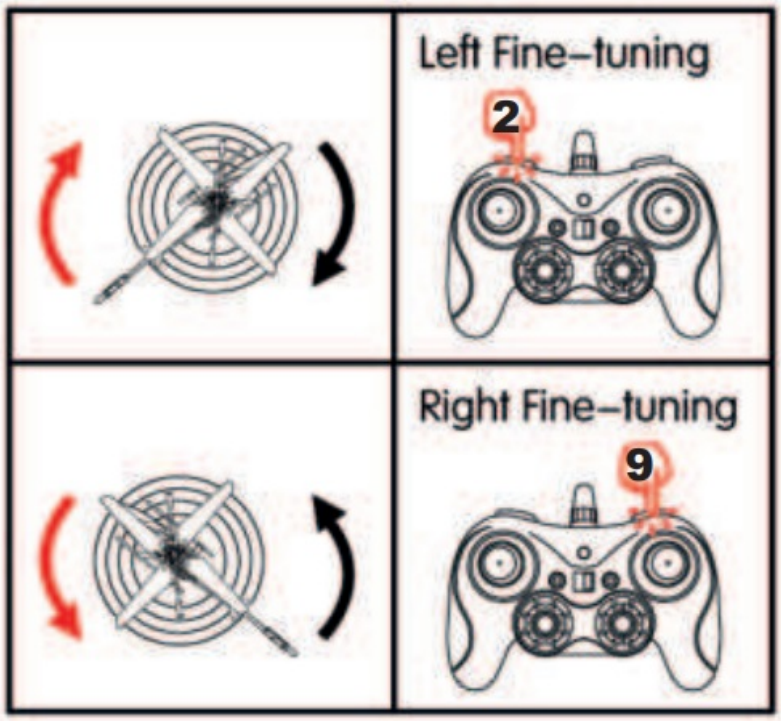
The model has an automatic height stabilization (altitude hold), i.e. your model automatically holds the specified height. As long as you hold the left-hand lever of the remote control pressed upwards, the model will climb upwards. If you pull the lever downwards, the model sinks. As soon as you release the lever, the model maintains the current height by itself.



Pressing the right control lever backwards/ downwards causes the model to fly backwards. Pressing the lever forwards or upwards causes the model to fly forwards.
Pressing the lever to the right causes the model to turn to the right around its own axis. Moving the lever to the left causes the model to turn to the left.

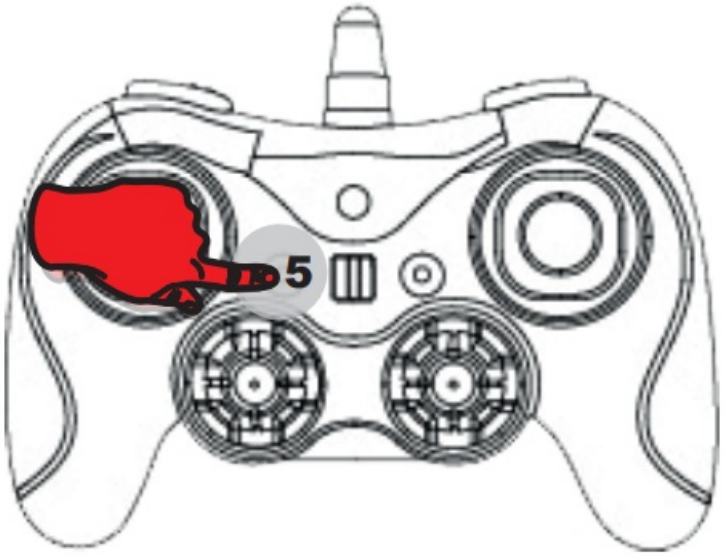
Always charge the battery outside of the model to avoid overheating.
Always use a fireproof base when charging.
NEVER charge unattended (e.g. “overnight”).
When the model is not in use the battery must ALWAYS be disconnected and removed from the model.
Disconnect connectors by pulling the plug ONLY, NEVER pull the cables.

Trim



If the model does not stay still at one point during hovering flight and rotate around the main axis, you can trim the model and achieve a smooth hovering flight.
If the model turns to the right, trim it with button 2 …
If the model turns to the left, trim it with button 9 …
… until the model no longer rotates around the main axis.

Emergency stop



If a dangerous, uncontrollable situation should arise you can switch off the model completely using the emergency stop.
To do this, press and hold the button “5”.
Now the motors of the model are switched off completely.
The model can be damaged in the event of a crash!

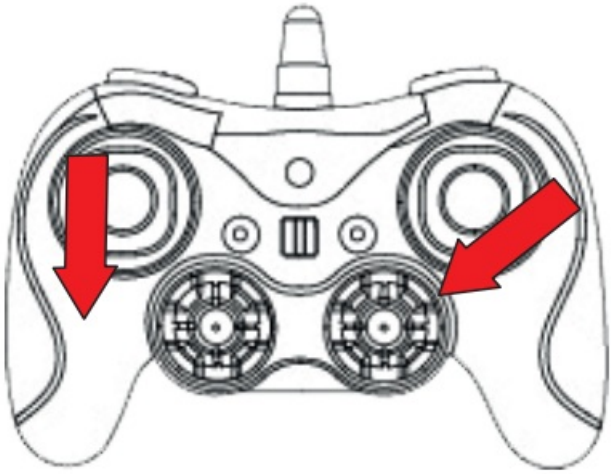
Use ONLY in an emergency.
The model can be damaged!

Re-binding

If the copter does not respond to the control commands of the remote control anymore or a new transmitter is used, it is necessary to rebind it with the copter. Proceed as follows:

1. Switch on the copter and place it horizontally.
2. Switch on the transmitter.
3. The LED of the copter flashes, after approx. 3 seconds the binding is newly established.
4. Always reset the model after a crash, exchange of parts or change of transmitter.

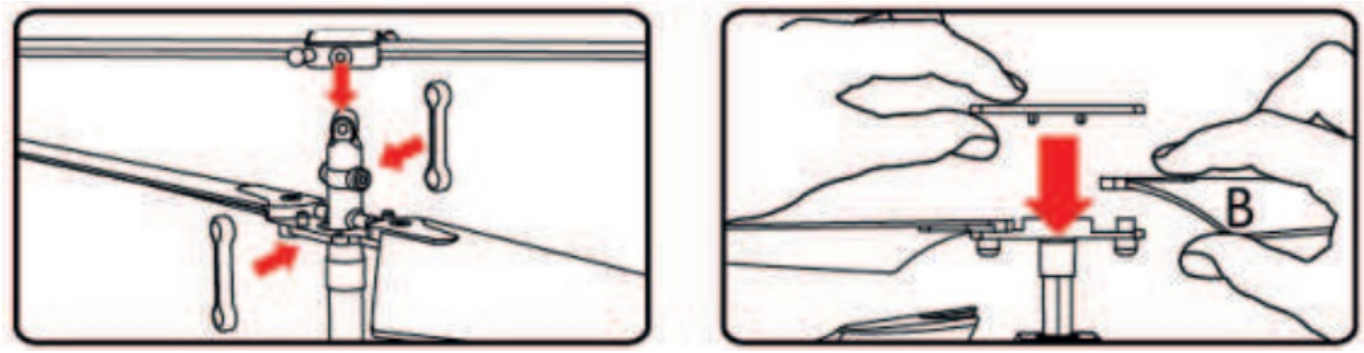
Reset



If the drone can no longer be properly controlled or trimmed and/or no longer responds correctly to the control commands from the transmitter, you can reset the model as follows:

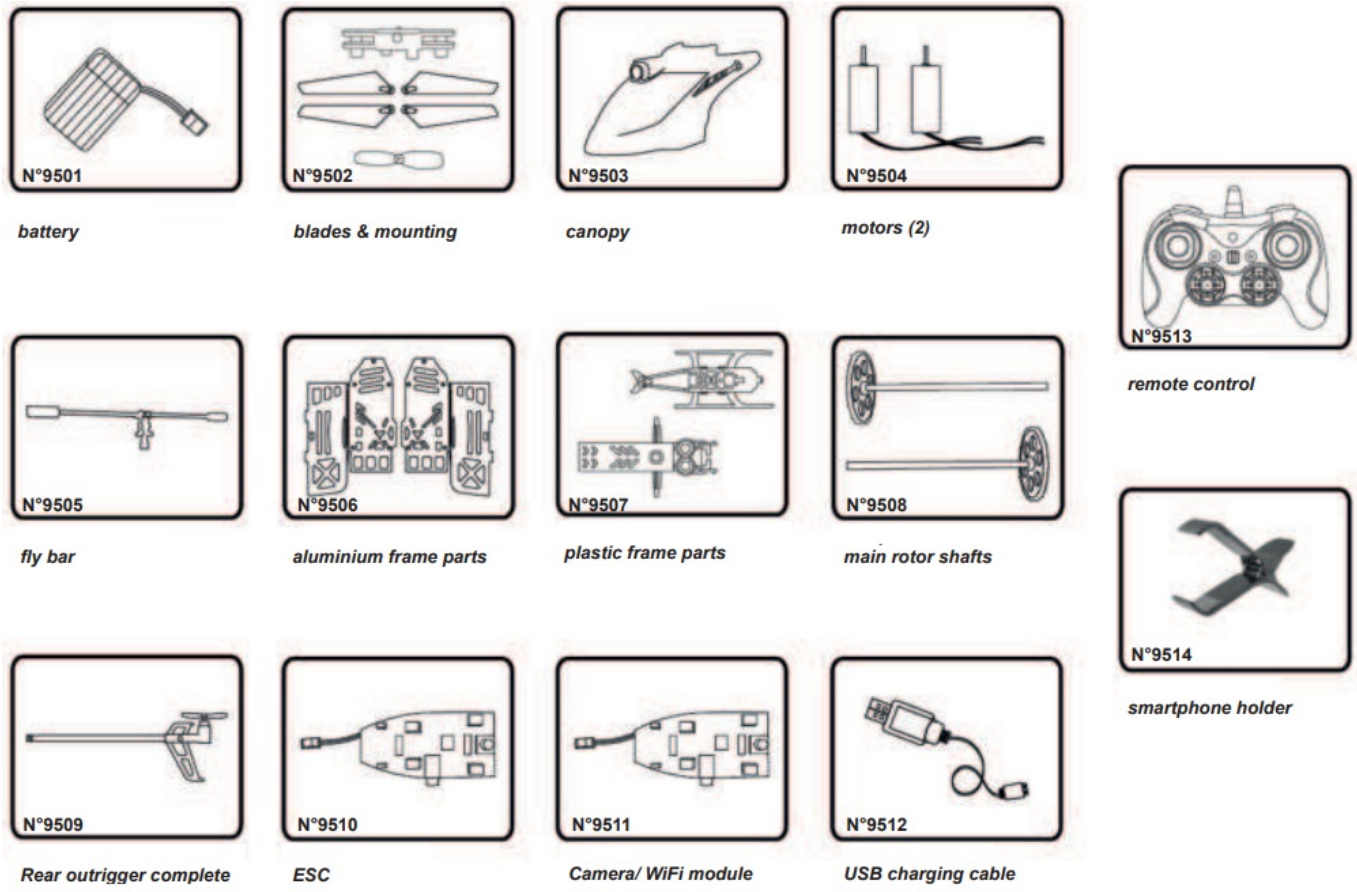
1. switch on the copter and bind them with the transmitter (see launch preparations). Place the model horizontally on the ground.
2. press both control levers down to the centre and hold this in the position. The Copter LEDs start flashing. If the LEDs are constant again, the reset is completed.

Changing the rotor blades



Defective/worn rotor blades and other parts must be replaced immediately to ensure the proper functioning of the model.
When changing the rotor blades, make sure that exactly the same labelled blades are attached again. Above rotor blades with marking “B”, below with marking “A”.
Incorrectly fitted rotor blades will result in loss of control and damage to the model!

Spare parts



FAQ

problem	cause	solution
Remote control does not work	Batteries empty or incorrectly inserted.	Ensure correct polarity, insert new batteries.
Copter cannot be controlled	Transmitter not bound/ calibrated.	Re-bind transmitter, perform reset.
	Loss of control due to too strong wind.	Fly in calm or indoor conditions.
Copter cannot be lift up	Drive battery empty/ defective.	Charge battery, use new battery.
	Rotor blades damaged / incorrectly mounted.	Change blades/mount correctly (A/B)
APP does not work/ no picture	No WLAN connection, operating system or app not up-to-date.	Establish WLAN connection with the Copter, then open App, update your phone's operating system, reinstall App.

FPV APP

You can use your smartphone for live image transmission or to control the copter. For this purpose the installation of an app is necessary (KY FPV). The Copter can also be operated without a mobile phone / app. Download the app (scan QR code) and install it on your smartphone (Android or IOS).

IOS

https://apps.apple.com/us/app/ky-fpv/id1486555370?l=zh&ls=1

Android

https://play.google.com/store/apps/details?id=com.cooingdv.kyfpv

We always recommend using the controller to control the model.

Control via app is only suitable for experienced pilots!

Connect the copter to your mobile phone in the WLan settings and start the app after the connection is established.
You will see the start screen and press “PLAY/START”.

1. back to the start screen
2. Take a picture
3. Record video
4. Play photo/ video
5. Agility
6. Altitude hold on/off
7. Gravity Sensor Mode
8. Mobile phone control on/off
9. Open/close menu
10. flip the displayed image
11. 3D view for FPV glasses
12. Control lever left
13. Drawing route
14. Control lever right
15. Auto-Start
16. Emergency stop
17. Trim
18. Auto-Landing

5) Agility: Here you can adjust the agility/ speed/ reaction time of the copter.
6) Altitude Hold: Must be activated (green light) when controlling via mobile phone.
8) The control is active when the app is started. If you only want to use the mobile phone as a monitor for image

transmission, switch it over here (the control levers are then hidden).
10) If your live image is displayed upside down you can turn it around here
13) Drawing Route: Click on the icon, after the flight route has been drawn on the Copter will follow the appropriate route.

Declaration of conformity (CE)

Declaration of Conformity in accordance with the Radio Equipment Directive (RED) 2014/53/EU

I hereby declare that the product:
DF-100 FPV Helikopter mit FPV-Kamera
Product number:
9500 (EAN: 4250684195004)
Complies with the essential requirements and the other relevant provisions of the Directive (RED) 2014/53/EU, when used for it intended purpose.
Manufactured in accordance with the following harmonised standards:
Draft EN 301 489-1 V2.2.1 | EN 301 489-3 V2.1.1 | EN 31 489-17 V3.1.1
EN 62115: 2005 + A12: 2015 Electrical Toy Safety Test
EN 62311:2008 | EN 62479:2010 | EN 300 328 V2.1.1 | EN 300 440 V2.1.1
EN71-1:2014+A1:2018 for mechanical and physical properties
EN71-2:2011+A1:2014 Flammability test
EN71-3:2013+A3:2018 on migration of certain elements
EN71-3:2013+A3:2018 on migration of certain elements & EU
2018/725 amending 2009/48/EC (effective from Nov 18,2019) for chromium (VI) migration
EN71-3:2019 on migration of certain elements
European RoHS Directive 2015/863/EU Annex II; recasting 2002/95/EC – Certain hazardous substances

1. Test in DCK modulation (802.11b)

Channel	Frequency (MHz)	EIRP (dBm)	EIRP (mW)	E Field Strength (V/m)	E Field Strength Limit (V/m)	Result
1	2412	14.52	28.31	4.81	61	Pass
7	2442	13.56	22.80	4.14	61	Pass
13	2472	13.79	23.95	4.24	61	Pass

2. Test in OFDM modulation (802.11g)

Channel	Frequency (MHz)	EIRP (dBm)	EIRP (mW)	E Field Strength (V/m)	E Field Strength Limit (V/m)	Result
1	2412	13.95	24.83	4.32	61	Pass
7	2442	13.81	24.04	4.25	61	Pass
13	2472	13.42	21.98	4.06	61	Pass

3. Test in OFDM modulation (802.11 n (HT20))

Channel	Frequency (MHz)	EIRP (dBm)	EIRP (mW)	E Field Strength (V/m)	E Field Strength Limit (V/m)	Result
1	2412	13.62	23.01	4.15	61	Pass
7	2442	13.15	20.65	3.94	61	Pass
13	2472	13.46	22.18	4.09	61	Pass

The source-based time-averaging power which is below the max permitted sending level of 20 mW, and then the

EUT is not needed to conduct SAR measurement.
Frequenzbereich: 2412 – 2472 MHz
drive & fly models, Jürgen Kamm
Drahthammer Str. 22
92224 Amberg, Germany

Manufacturer / responsible Person

managing director
place of issue/ date: Amberg (Germany), 30.10.2018

Safety/ hazard information for rechargeable batteries/ batteries

Service Hotline:
DF-Models Drahthammerstr. 22 92224 Amberg Deutschland info@df-models.com www.df-models.com

www.df-models.corn info@df-models.corn Service-Telefon: +49 (0) 9621 782 293

Disclaimer

Since we (DF Models) cannot monitor your handling of the battery, any liability and warranty for incorrect handling, charging/discharging, damage, etc. is expressly excluded.

Danger/ safety instructions

Always keep batteries/ rechargeable batteries out of the reach of children and pets.
Leaking or damaged batteries/accumulators can cause burns on contact. If skin or eyes come into contact with the electrolyte, immediately rinse the area thoroughly with clean water and seek medical attention immediately. Use suitable protective gloves when disposing of the defective battery.
If you notice any abnormalities such as odor, discoloration, excessive heating or deformation of the battery, disconnect the battery from the charger or consumer immediately. Dispose of the batteries/accumulator properly

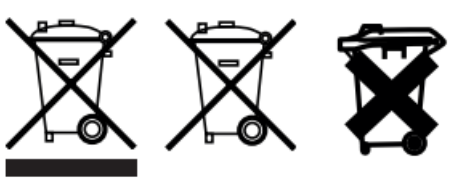
(take to a collection point, DO NOT dispose of in household waste!).
Batteries must not get damp or wet. Avoid the formation of condensation.
Never dispose of batteries/ rechargeable batteries in a fire.
Never expose the batteries/ rechargeable batteries to adverse ambient conditions (e.g. wetness, excessively high or low ambient temperature, direct sunlight, ignition sources or open fire, dust, vapors, solvents).
Avoid heavy soiling and excessive mechanical stress on the battery.
Never modify batteries/ rechargeable batteries structurally, never solder directly to batteries/ rechargeable batteries.
Never tug at the connection cables.
Never open batteries/ rechargeable batteries by force.
Never mix batteries and rechargeable batteries in one device at the same time.
Always use batteries/ rechargeable batteries of the same type and manufacturer.
When inserting batteries/ rechargeable batteries into the battery holder, ensure that the polarity is correct. If the polarity is incorrect, not only your model but also the battery/accumulator will be damaged.
Batteries/ rechargeable batteries must never be short-circuited, damaged, disassembled or thrown into open fire. There is a risk of fire and explosion.
Immediately disconnect the battery from the charger/ consumer if it becomes very hot.
Only charge rechargeable batteries with suitable chargers.
Always charge batteries on a non-flammable surface.
Never charge/use rechargeable batteries near flammable materials.
Never charge/use batteries without supervision.
Never charge the rechargeable batteries in a model, vehicle/caravan, etc.
Never charge or use batteries with reverse polarity.
Do not charge batteries that are overcooled or overheated.
Do not charge/use batteries in locations subject to high static discharge.
If the model is not used for a longer period of time, remove the inserted batteries from the remote control and from the model to avoid damage due to leaking / deep discharged batteries.
Conventional alkaline batteries (1.5 volts) are intended for single use only and must be disposed of properly afterwards. Dispose of empty batteries or defective rechargeable batteries in an environmentally friendly manner via authorized collection points. Alkaline batteries must NOT be recharged, there is a risk of fire/explosion.
Disposing of batteries/battery packs in the household waste is prohibited.
In case of fire, never extinguish batteries with water (see Extinguishing media).
Incorrect handling of batteries/ rechargeable batteries can lead to explosions/fire.

Extinguishing agent

In case of fire of batteries/accumulators never extinguish with water! Only use dry extinguishing agents to smother the flames (e.g. sand). Carbon dioxide or extinguishing powder/foam are also suitable for fire fighting. The use of a fire extinguisher with AVD extinguishing agent is particularly recommended.

Waste management

Batteries / rechargeable batteries must never be disposed of in household waste! Batteries/rechargeable batteries can be handed in at public collection points in your community. Batteries/ accumulators can also be handed in at all sales points for batteries/ accumulators. Please make sure that batteries are not short-circuited (secure with tape if necessary). DF Models is registered under the WEEE Reg. No. DE30915550 at the EAR foundation and recycles all used electronic components properly. Batteries/rechargeable batteries are marked with the symbol shown below (garbage cans). This indicates the prohibition of disposal in household waste. Additional designations for the determining heavy metal are: Cd=cadmium, Hg=mercury, Pb=lead.



Storage

Batteries should not be empty or fully charged during longer storage. A state of charge of approx. 80 % of the rechargeable batteries is ideal. The state of charge should be checked and adjusted at regular intervals. Always store batteries safely in a non-flammable place (e.g. use LiPo bag etc.). Store and keep at room temperature (approx. 15-22°C).

Charging

Batteries may only be charged with suitable chargers. For Lixx batteries only charge with chargers with connected/integrated balancer! LiPo batteries have a final charging voltage of 4.2 volts/cell, NiMH batteries of 1.45 volts/cell. Accus should be charged with a charge rate of 1 C, higher charge rates can shorten the life of the battery.
Charge rate: capacity x C-rate = charge current (example with 1C charge rate: battery with 1000mAh x 1C charge rate = 1000mAh (1 A) charge current)
Maximum temperatures when charging batteries: LiPo max. 45°C | NiMH max. 60°C

Discharge

LiPo batteries have a final discharge voltage of 3.2 volts/cell, NiMH batteries of 0.9-1 volts/cell. These values must not be fallen below, otherwise the batteries will be irreparably damaged (risk of explosion/fire).
Discharge rate: The discharge rate specifies the value with which the rechargeable batterie may be loaded during discharge. Higher values lead to irreparable damage (explosion/fire hazard). For LiPo batteries, the C-value is usually visibly indicated on the battery. DF-Models NiMH battery packs (7.2 volt racing stick packs) have a C-rate of 10-15C. Batteries can be discharged/loaded constantly with the indicated value, briefly with the double C-value (max. 3 seconds).
Capacity value x C-rate = discharge current (Example: Battery with 25C (discharge rate) and 1000mAh | 25C x 1000mAh (1A) = 25A discharge current (duration)
Maximum temperatures when discharging batteries: LiPo max. 60°C | NiMH max. 60°C

Temperatures

Batteries are very sensitive to temperature. At temperatures below 15°C as well as above 35°C, the removable capacity is significantly lower than in the optimum temperature range of approx. 15-35°C. Temperatures below 0°C can cause damage to the battery.
Maximum temperatures when charging batteries: LiPo max. 45°C | NiMH max. 60°C
Maximum temperatures when discharging batteries: LiPo max. 60°C | NiMH max. 60°C

http://www.youtube.com/channel/UCo6qta9SVqQ3-qTNyUMNBCw

http://www.df-models.com

Documents / Resources

	df models DF 100 PRO FPV Helicopter With FPV Camera [pdf] Instruction Manual DF 100 PRO FPV Helicopter With FPV Camera, DF 100, PRO FPV Helicopter With FPV Camera, FPV Helicopter With FPV Camera, Helicopter With FPV Camera, With FPV Camera, FPV Camera