1. APP introduction

Through the Cfly 2 app, user can check the FPV, as well as the status and data of the current aircraft. It can also control the flight of the aircraft, control the camera of the aircraft, control the photographing, camera shooting and set the flight parameters.
In order to get a better experience, please be sure to connect the Cfly 2 APP before flight.

2. Download Cfly 2 APP

Scan the QR code to download the app.

1) Please make sure that the mobile software environment is android 6.0 or above and IOS 10.0 or above.

2) Make sure the mobile phone has enough power when connecting the app.

3) When use the Cfly 2 APP on mobile phone, please focus on controlling the aircraft.

4) Make sure the map on Cfly 2 APP is loaded before flight.

5) Please register the aircraft according to local laws and regulations.

3. Register / log in

Install Cfly 2 app, and register an account as shown:
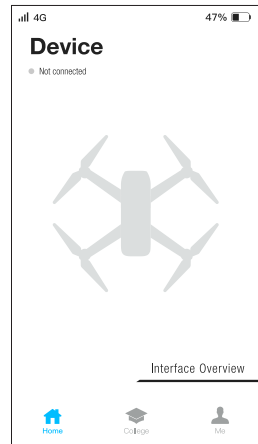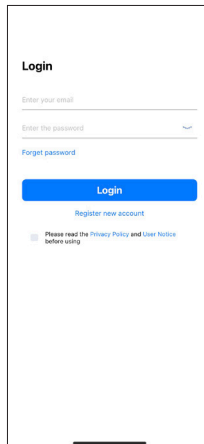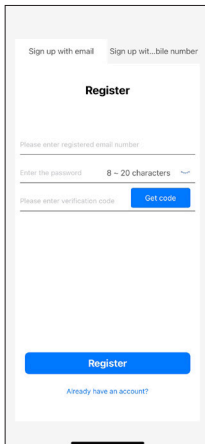
4. Connect the aircraft

Turn on RC, connect RC and phone via data wire.

Open Cfly 2 APP to check whether the aircraft status in the upper left corner is connected. If 'connected ' is displayed, click 'start flying' to enter operation interface.

5. Camera setting

① **Homepage**
② **Remote controller signal**
③ **Mobile GPS accuracy**
④ **GPS signal**
⑤ **Battery life**
⑥ **Flight mode and status prompt:**
⑦ **Aircraft flight status data:**

H: the altitude of the aircraft's current position and take-off point. ;

D: the distance between the current position of the aircraft and the take-off point ;

VS: the current vertical flight speed of the aircraft;

HS: the current horizontal flight speed of the aircraft.

⑧ **General settings**
⑨ **One key takeoff:**

Before the aircraft takes off, the take-off icon ' 🛫 ' is

displayed. After clicking , the aircraft will automatically takeoff and hover at a height of 1.2 meters.

After the aircraft takes off, the landing icon' 🛬 ', is displayed, and the aircraft automatically descends to the ground after clicking. will automatically takeoff and hover at a height of 1.2 meters.

⑩ **RTH**
⑪ **One key shots:**

Switch flight modes, or start one key short.

⑫ **Map**
⑬ **Photo/video switch**
⑭ **Photo/video start**
⑮ **Camera setting**
⑯ **Album**
⑰ **Current camera setting**

6. General settings

1) Aircraft setting
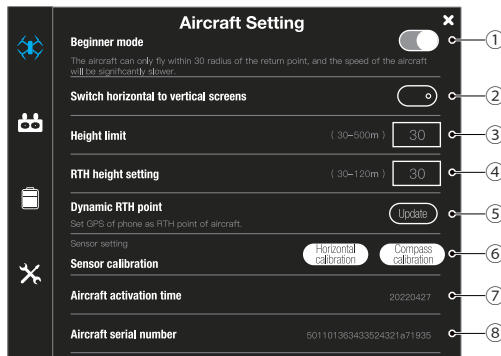
① **Beginner mode:**

Activate 'Beginner mode' before take-off, flight distance and altitude will be limited. the default flight distance is 50 meters and the flight altitude is 30 meters.

② **Switch horizontal to vertical screens**

③ **Height limit:**

Set the maximum flight altitude.
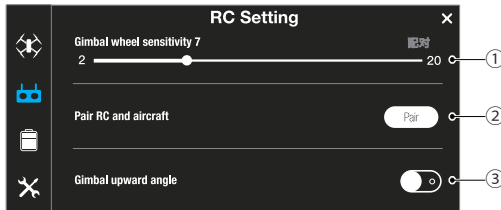
④ **RTH height setting:**

Set the flight altitude of RTH.

⑤ **Dynamic RTH point:**

Update return point.

⑥ **Sensor calibration:**

Refer to relevant chapters for its functions.

⑦ **Aircraft activation time**

⑧ **Aircraft serial number**

2) RC setting

① **Gimbal wheel sensitivity:**

② **Pair RC and aircraft:**

Pair the remote control. Refer to the relevant instructions for its functions.

③ **Gimbal upward angle:**

When on, the camera can be operated up to 20 degrees horizontally.

3) Battery settings

Click ' ' ,enter battery setting interface,set rest battery capacity to alarm,the value is from 10%~80%, when battery of aricraft is lower than the value,the indicator of aircraft turn to flashing red,meanwhile,aircraft will return to home and land.
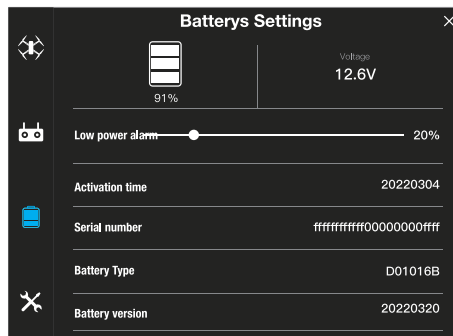
4) Other settings
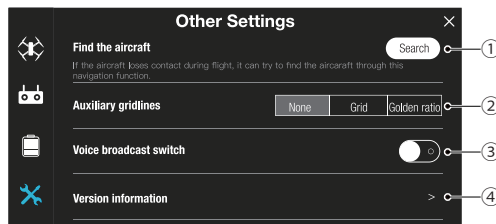
① **Find the aircraft**

Find the lost aircraft through the navigation function.

② **Auxiliary gridlines**

It is used for the composition calibration of picture viewfinder.

③ **Voice broadcast switch**

④ **Version information**

Display version information.

Flight

This section describes flight precautions, flight restricted area and aircraft precautions.

After completing the preparation, please conduct flight training or training first.

Please choose the right flight environment when flying. The default flight height of the aircraft is 120m. Do not exceed the safe flight height. Strictly abide by local laws and regulations during flight.

Be sure to read the 'safety and disclaimer' before flying to understand the safety precautions.

1. Flight environment requirements

1) Do not fly the aircraft in bad weather such as high winds, snow, rain, foggy weather, etc.

2) Choose a wide, open place with no tall buildings surrounded as a fight site. Buildings that use a lot of steel bars may affect the compass work and block GPS signals resulting in poor positioning or even inability to locate the aircraft.

3) When fying, please keep aircraft in sight, away from obstacles, crowds, water, etc.

4) Do not flying in areas that have high-voltage lines, communication base stations or transmission towers, etc. to avoid signal interference of the remote controller.

5) When flying above 6000m altitude, the performance of the aircraft battery and power system will be degraded due to environmental factors, thus the fight performance will be affected. Please fy with caution.

6) GPS is not available for fight in Arctic circle and Antarctic circle.

2. Flight restrictions and flight limits of special area

Flight restrictions and flight limits of special area according to the air traffic control regulations and the aircraft management regulations of ICAO and different nations' air traffic control, aircraft must fly in the prescribed airspace.

3. Beginner mode

For beginners, please turn on the beginner's mode. Once the mode is activated, the aircraft will locate its own position by GPS before ready to takeoff. If the aircraft can not be controlled after takeoff, the RTH can be used to allow the aircraft to return automatically.

It is highly recommended to use the beginner mode, in which the flying height of the aircraft will be limited to 30 meters and the distance will be limited to 50 meters (the height / distance limitation can be manually adjusted), and the aircraft can only takeoff if there is a good GPS signal. If user are already familiar with the operation of the aircraft, user can turn off the beginner mode in the 'aircraft settings' menu of the app.

4. Pre-flight inspection

1) Make sure the remote controller, aircraft battery, and mobile device are fully charged.

2) Make sure the propellers intact and installed correctly.

3) Make sure that front and rear arms and the blades are fully unfolded.

4) Make sure that the camera lens is clean.

5) Make sure the micro SD card installed correctly.

6) Ensure that the battery is firmly installed.

7) Always use original components or accessories certified by the manufacturer. The use of non-original accessories may pose a hazard to the use of the aircraft.

5. Compass calibration

The aircraft has a built-in compass that ensures that the aircraft maintains an accurate heading during intelligent flight. The compass status must be checked before each flight. If encounter the following situations, please calibrate the compass:

(1). Before the flight to a new flight site.

(2). When the aircraft status indicator shows that the compass has errors.

(3). When the APP and the aircraft remind to calibrate the compass.

(4). When the aircraft experiences severe shifting during hovering or flying.

## Compass calibration via APP

(1). Enter calibration mode :

When aircraft and APP connected, Choose 'aircraft—operation interface----setting---aircraft setting' click' ☰ ' sensor calibration--compass calibration.
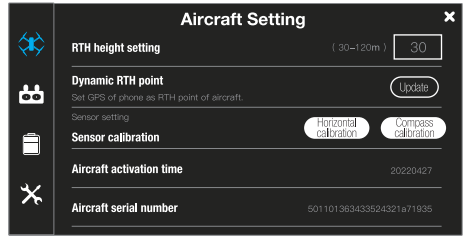

(2). Compass calibration:

When the APP pops up a prompt, check the current environment and keep away from metal objects as prompted. Then tap the 'calibration' button,In this case, when the status indicator on the rear arm of the aircraft flashes blue and red alternately, the compass calibration mode starts.
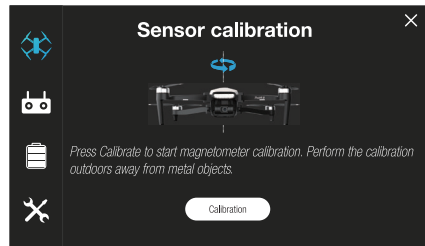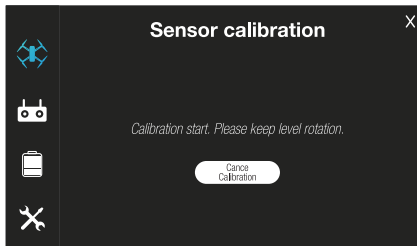
Horizontal calibration :

When the APP prompts to rotate the aircraft horizontally, place the aircraft horizontally in the hand, then turn the aircraft horizontally until the status indicator on the rear arm of the aircraft changes to an alternatively flashing red and green light, which means that the horizontal calibration is successful.

Horizontal calibration   Vertical calibration
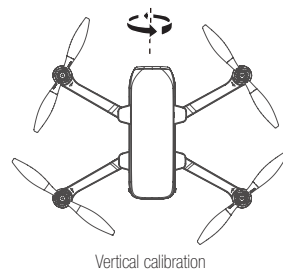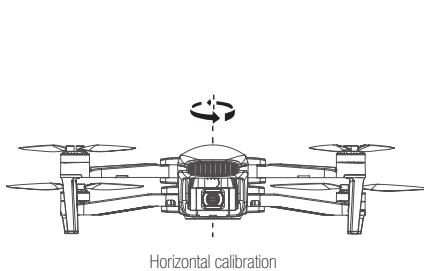
Vertical calibration :

When the APP prompts to place the aircraft's head to be up and rotates, place the aircraft in the hand and ensure that the aircraft body is perpendicular to the ground; then rotates the aircraft horizontally. When the status indicator on the rear arm of the aircraft turns green (solid or flashing), the compass is successfully calibrated, at this time, the APP will prompt 'calibration successful', then

tap 'finish' to end the calibration process, if the status indicator turns to solid red light for about 6 seconds, the compass calibration fails. Please go to another location and re-calibrate.

Note：

● **After changing the flight site, make sure to calibrate the compass before the first flight.**

● **If the aircraft indicator flashes blue and green alternately during flight, which means that the compass is abnormal and need to calibrate.**

● **Stay away from the environment with magnetic interference when calibrating, otherwise the calibration may fail.**

● **Do not calibrate in areas with strong magnetic fields, such as magnetic mines, parking lots, and building areas with underground reinforcement.**

● **Do not calibrate with carrying ferromagnetic materials such as keys, mobile phones, etc.**

● **Do not calibrate when large pieces of metal are nearby.**

6. Basic flight operation steps

(1) Place the aircraft in a wide open area that its front is user's front.

(2) Turn on the aircraft and remote controller.

(3) Connect the remote controller with the aircraft and then proceed aircraft self-diagnostic tests.

(4) Connect the APP with mobile device and enter into the FPV interface.

(5) Unlock the aircraft after the APP indicate: ready go.

(6) Pull up the throttle stick then the aircraft takes off, and control the aircraft flight by left/right stick.

(7) Pull down the throttle stick to land the aircraft.

(8) Down the throttle stick to the bottom position and keep for 3 seconds to lock the aircraft.

(9) Pull out the battery from the aircraft and then turn off the remote controller.

7. Flight control instructions

1) Power on

Put the aircraft on the fat surface, turn on the remote controller and aircraft successively, wait for aircraft on flat ground for about 30 seconds for self-diagnostic tests.

When the aircraft 's indicator light turns from flashing or solid blue to flashing or solid green, which means the Remote controller and aircraft are connected.

In the process of self-diagnostic tests, ground vibration may cause abnormal operation of the aircraft and gimbal, please shut down and restart the aircraft on the static horizontal ground to enter the normal working state.

2) Connect APP

Turn on the 'Cfly 2 APP', reference page 24 Connect the aircraft.

3) GPS signal status

When the status indicator of the aircraft is solid green, it indicates that the GPS positioning is normal, and the aircraft can takeoff safely.

When the green light flashes on the aircraft status indicator, it indicates that the GPS signal is weak or no signal, and altitude mode can be selected for operation (this mode is difficult to operate, it is not recommended for beginners).

Note：

● **Set the aircraft up and get ready to takeoff after the aircraft indicator light turns solid green (indicating good GPS signal).**

● **Please choose an open and spacious field. Tall steel structures and metal materials will interfere the compass and GPS.**

4) Operate the aircraft takeoff

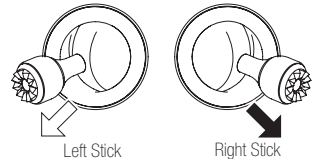### (1) One-key takeoff on remote controller :
Long press the ' 🛧 'button for 2 to 3 seconds. When the remote controller beeps steadily, the aircraft will automatically takeoff and ascend to altitude of 1.2 meters and hover.

(2) One-key takeoff on Cfly 2 app :
Click the ' 🛧 ' on app, then click confirm, the aircraft will automatically takeoff and ascend to altitude of 1.2 meters and hover.
Please make sure the safe distance for operate.

(3) Takeoff manually :
Toggle the left and right joysticks outward as to get the propellers started to rotate.
Slowly push the throttle, the aircraft will takeoff.

Left Stick   Right Stick

5) Operate the aircraft flying
Reference page 19 'throttle control stick mode'.

6) Operate the aircraft land

(1) One-key landing on remote controller :
Long press the' 🛬 'button for 2 to 3 seconds. When the remote controller beeps steadily, the aircraft will automatically land and propeller stop to rotate.

(2) One-key landing on Cfly 2 app :
Click the ' 🛬 ' on app, then click confirm, the aircraft will automatically land and propeller stop to rotate.
Please make sure the safe distance for operate

(3) Landing manually :
Slowly pull the throttle, the aircraft will descend to land, keep pulling the throttle, propeller stop to rotate.

7) Power off
After completing the flight, please turn off the power of the aircraft and the remote controller in turn.

Note: Please do not touch the motor after the aircraft just landed!

8. Suggestion and tips for recording video

(1) Make sure components of the aircraft are normal before flight.

(2) Choose sunny, windy weather for recording.

(3) Perform test flights to establish flight routes and to preview scenes.

(4) Push the control stick gently to keep the aircraft movement smooth and stable.

(5) Choose appropriate gimbal shooting angle.

(6) Try to record the videos under positioning mode.

Appendix

1. Specification

1) Aircraft

Size (fold): Size (unfold):	170x108x74 mm (L*W*H) 182x255x74mm (L*W*H)
Wheelbase	280 mm
Weight	530g
Max ascent speed	Normal mode: 3m/s Sport mode: 5m/s
Max descent speed	Normal mode: 3m/s Sport mode: 3.5m/s
Max speed	Normal mode: 10m/s Sport mode: 17m/s RTH mode: 12m/s
Max service ceiling above sea	5000m
Max flight time	35 mins
Satellite positioning systems	GPS/GLONASS
Hover accuracy range	Vertical: +/- 0.5 m± 0.2 m (ultrasonic system,optical flow system works) Horizonal: +/- 1.5m± 0.3 m (ultrasonic system,optical flow system works)
Maximum flight height	120m (maximum 500m (need to change setting on app)
Operating temperature range	0℃ ~40℃

2) Optical flow system

Operating environment	Surface with clear pattern and adequate lighting (lux > 15)
Velocity range	≤1.5 m/s at 6.6 ft (2 m) above ground
Altitude range	0.5~5m

3) Ultrasonic altitude system

Operating environment	Except for surface of water or ground of absorbing material(such as thick carpet)
Velocity range	≤3m/s
Altitude range	0.2~4.5m

4) 3-axis gimbal

Controllable	Pitch: -90°~20°
Stabilization	Pitch:+30/-120°, Roll:± 35°, Yaw:±30°

5) Camera

Sensor	Ambarella A12, sony CMOS
Image size	5120×3840(20MP)
Shooting mode	Single shot
Video recording resolution	3840×2160
Maximum video bit	50 Mbps
Supported file systems	FAT32(<=32GB) /exFAT(>32GB)
Photo	JPEG
Video	MP4
Supported SD cards	Micro SD™ Max capacity:128GB. UHS-I speed grade 3 rating required
Operating temperature range	0℃ ~40℃

6) Battery

Capacity	3100mAh
Voltage	11.4V
Battery type	LiPo 3S
Energy	35.34Wh
Net weight	196 g
Max charging power	35W
Charge time	<5h(with 5V 2A adapter)
Charging temperature range	0℃ ~40℃

7) APP

|	
Mobile app	Cfly 2
Live view quality	1080P
Aerial photography mode	Dronie,rocket,circle,helix
Required operating systems	Andrio 6.0 above, IOS 10.0 above
FPV transmission distance	5000m

8) Charger

Input	5 V 2A (recommend)
Output	4.35V 0.7A×3
Rated power	10W

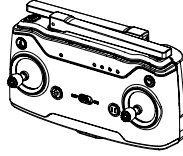## 9) Remote controller

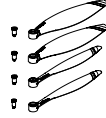|	
Operating frequency	2.4 GHz
Max transmission distance	5000m
Transmitter power (EIRP)	FCC: ≤23dBm CE: ≤14dBm SRRC: ≤20dBm
Operating current / voltage	500mA @ 3.7V
Capacity	2600mAh
Battery capacity (built-in)	3.7V
Battery type	LiPo 18650 1S
Battery power	9.62Wh
Operating temperature range	0℃ ~40℃
Supported mobile device size	Thickness supported:6.5-8.5mm
Charge	USB
Maximum charge power	5W
Charge time	< 3h(with 5V 2A adapter)

2. Packing detail

Before using this product, please check whether the product package contains all the following items. If something is missing, please contact our company or authorized dealers.
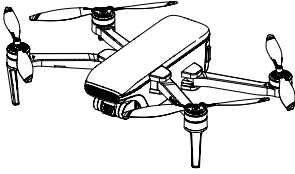
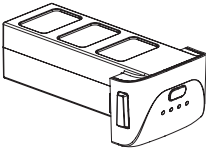
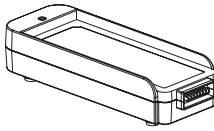Aircraft x1   Remote controller x1   Propellers x2
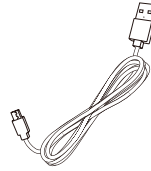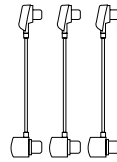

Aircraft battery x1   Balance charger x1   USB wire x1   Date wire x1
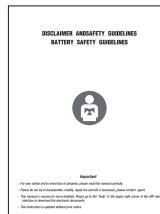

Screwdriver x2   Operation manual x1   User manual x1

3. Important statement

● This product is not a toy, but a precision device that integrates professional knowledge such as mechanics, electronics, aerodynamics, and high-frequency emission. Accidents can be avoided by correct assembly and debugging. The owner of the product must use a safe way to operate and control; improper operation may cause serious personal injury or property damage.

● This product is suitable for people who have experience in operating model aircraft and are at least 14 years old.

● If user encounter problems with use, operation, maintenance, etc., please contact local dealer or relevant personnel of our company. Our company and the seller are No responsibility for any loss and damage caused by improper work and personal injury.

● This product contains small parts, please keep it out of the reach of children to avoid the risk of ingestion or suffocation.

4. Warranty information

Please browse the official website for the latest after-sales warranty information.

5. Safety precautions

The remote control model aircraft is the most dangerous commodity, so user must stay away from the crowd when flying. Improper assembly or damage to the body, poor electronic control, and unfamiliar operations may cause unpredictable accidents such as damage to the aircraft or personal injury. Please be careful when flying to be safe, user must understand the responsibility for accidents caused by your own negligence.

Stay away from obstacles and crowd

The remote control aircraft has an uncertain flight speed and state during flight, and it is potentially dangerous. Stay away from crowds and high-rise buildings when flying at the same time, avoid flying in bad weather such as wind, rain, thunder and lightning. Debugging and installing the aircraft must strictly follow the operating instructions when flying upwards, pay attention to keeping the aircraft at a distance of 1-2 meters from the user or other people. Avoid the aircraft from crashing into the head, face, and body of people when flying or landing, which may cause injury.

Keep away from humid environment

The inside of the aircraft is composed of many sophisticated electronic components and mechanical parts. Therefore, it is necessary to prevent the aircraft from getting wet or water vapor into the aircraft body. Avoid accidents caused by mechanical and electronic component failure. Please wipe the surface stains with a clean cloth during maintenance.

Avoid controlling alone

The control skills of remote control aircraft are difficult to learn in the early stage. It is necessary to avoid flying alone as much as possible, and the guidance of experienced persons is required.

Use this product properly

Please use original parts for modification or repair to ensure flight safety. Please operate and use within the scope allowed by the product function, and must not be used for illegal purposes other than security laws.

Safe operation

(1) Please operate the remote control aircraft according to your own status and flying skills. Fatigue, poor spirits or improper operation will increase the risk of accidents Probability.

(2) Do not use it near ears! Misuse may cause hearing damage.

Keep away from high-speed rotating parts

When the aircraft rotor is rotating at high speed, please keep the pilot, surrounding people and objects away from the rotating parts to avoid danger and damage.

Keep away from heat

The remote control aircraft is composed of metal, fiber, plastic, electronic components and other materials. Therefore, it is necessary to keep away from heat sources, prevent sunlight, and avoid deformation or even damage due to high temperature.

Environmental requirements

Discard the product at will, which may affect the environment, please recycle it properly according to local laws and regulations.

FCC statement :

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

(1) This device may not cause harmful interference, and;

(2) This device must accept any interference received, including interference that may cause undesired operation.

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

· Reorient or relocate the receiving antenna.

· Increase the separation between the equipment and receiver.

· Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

· Consult the dealer or an experienced radio/TV technician for help.

FCC radiation exposure statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body--only for small aircraft.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The mobile device is designed to meet the requirements for

exposure to radio waves established by the Federal Communications

Commission (USA). These requirements set a SAR limit of 1.6 W/kg

averaged over one gram of tissue. The highest SAR value reported under

this standard during product certification for use when properly worn on the body is 0.590W/kg.

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and that positions a minimum of 0mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.