# SKYDRO/D 云卓

泉 州 云 卓 科 技 有 限 公 司

# Skydroid- G12

User manual

V1.1

## Attention:

This product uses the following terms to classify the potential hazards that may be caused by improper operation.

**Note:** If not follow the instructions, it may cause property damage, major accidents and serious injuries.

**Warning:**Misuse of this product may result in injury, damage or loss of property. Read the manual carefully before using this product. This item is not a toy. This item is intended for use by professional UAV operators and installers only. Do not use this product if you lack the knowledge and expertise to install and maintain UAV radio equipment. Do not use unapproved or unofficial components with this system. Operators must strictly follow the operation guides set forth in this manual. Skydroid does not accept any liability for the use or misuse of this product.

## I.Overview

### 1. Product Features

(1) G12 series adopts Qualcomm 6nm processor, equipped with Android 13 (64-bit) embedded system, smooth operation, open ecology, can be installed on the market most of the APP. 2.4/5.8G dual-frequency wireless module with new high-power, high-bandwidth, support for automatic frequency-hopping and MCS autonomy and dynamic adjustment, the figure of the distance of the digital transmission up to 20KM, with a directional flat antenna, the distance of up to 40KM.

(2) G12 supports network port, USB interface, type-c interface, serial port and other rich interfaces to provide SDK development kit, support for video suspension, support for main stream flight control on the ground.

(3) 1920*1080 resolution, 5.5-inch high brightness display, large screen-to-body ratio, you can still clearly view the real-time display information in a sunny environment.

(4) Adopt high energy density lithium-ion battery, full power can work 4~8 hours, consistent wilderness survival thinking makes you have no worries about the reliability of the equipment.

### 2.Main use and application scope

It is used for video image transmission (optional camera is required), data transmission and control of unmanned equipment such as helicopters, fixed-wing, multi-rotor, vehicles and boats.

### 3. Environment conditions

**Pay attention**
A) Working temperature:-10℃ to +55℃.
B）Storage temperature:-20℃～+50℃.
C）Relative humidity:Not exceed 85%.
D）Atmospheric pressure:86kPa~106kPa.

E) The use of the location does not allow explosive hazardous media, the surrounding medium should not contain corrosive metals and damage the insulation of the gas and conductive media, not allowed to be filled with water vapour and the presence of serious mould.

F)The use of the location should have a defence against rain, snow, wind, sand, ash facilities.
**Warning:**Do not allow direct sunlight when using.

## 4. Working conditions

### Power supply and precautions

G12 series ground terminal is built-in integrated rechargeable lithium battery, compatible with the market standard TYPE-C interface, please use the original charger to charge.

If you encounter smoke, odour or night leakage when charging the ground terminal, please do not continue to charge the ground terminal and return to our factory for maintenance.

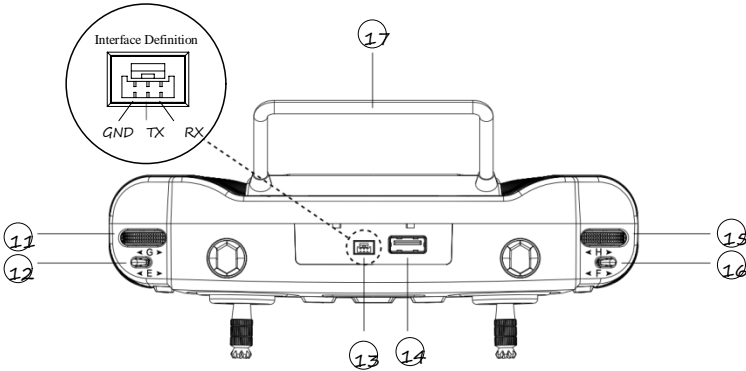Do not charge the product in an area where babies can touch it to avoid the risk of electric shock. Do not charge the product at temperatures exceeding 60 ℃.
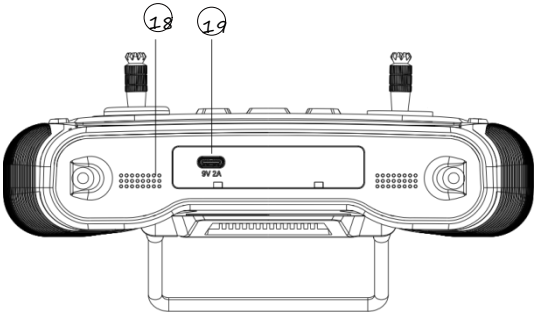
## II. Component names

### 1.Remote Controller
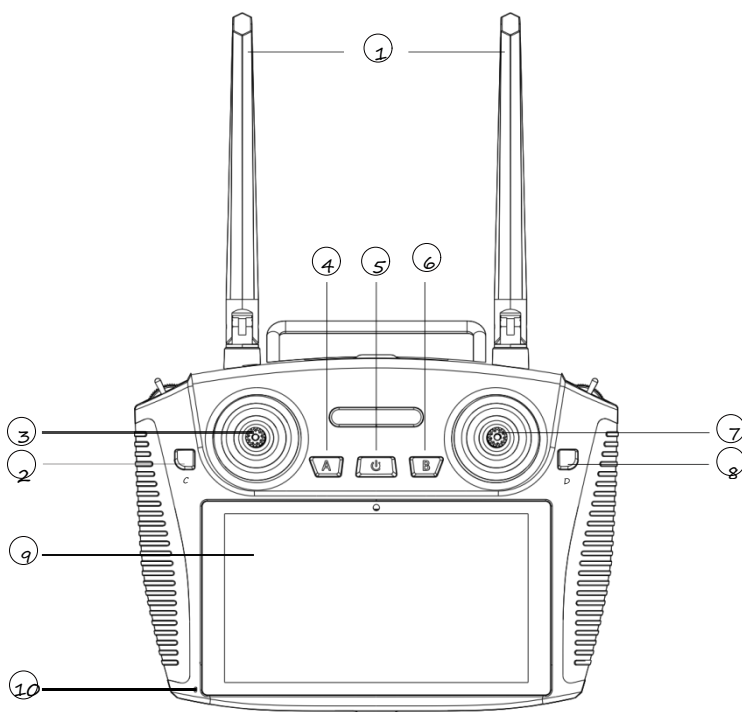


| Number | Annotation | Number | Annotation |
|--------|-----------|--------|-----------|
| 1 | 2.4G/5.8G 4dBm antenna | 6 | B Button (no function yet) |
| 2 | C Button (gimbal back to centre) | 7 | Right joystick X2, Y2 |
| 3 | Left joystick X1, Y1 | 8 | D Button(no function yet) |
| 4 | A Button (no function yet) | 9 | Display |
| 5 | Switch button | 10 | Microphone MIC |

| Number | Annotation | Number | Annotation |
|--------|-----------|--------|-----------|
| 11 | Jog wheel G (gimbal yaw) | 15 | Jog wheel H (gimbal pitch) |
| 12 | Three-position switch E (flight mode) | 16 | Three-position switch F (no function yet) |
| 13 | PPM output | 17 | Remote control handle |
| 14 | Upgrade interface | | |



| Number | Annotation | Number | Annotation |
|--------|-----------|--------|-----------|
| 18 | Speaker | 19 | TYPE-C (charging port) |

## III. Prepare the remote control

### 1.Remote control charging

About 3-4 hours to fully charge with the original charger.
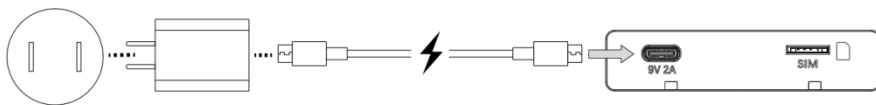


Please use the original charger to charge, in order to keep the remote control battery in the best condition, please ensure that the battery is fully charged once a month.
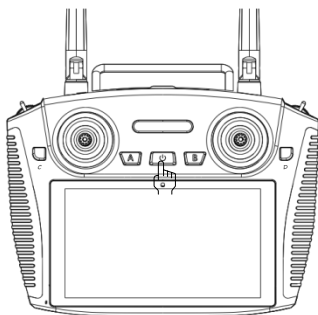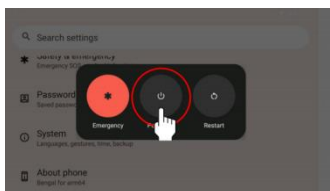
### 2. The antenna is opened correctly



## IV. Use, operation

### 1. Remote control on and off

Long press the power button for 2 seconds to turn on the remote control, long press the power button for 2 seconds, and then tap the screen to turn off the remote control.
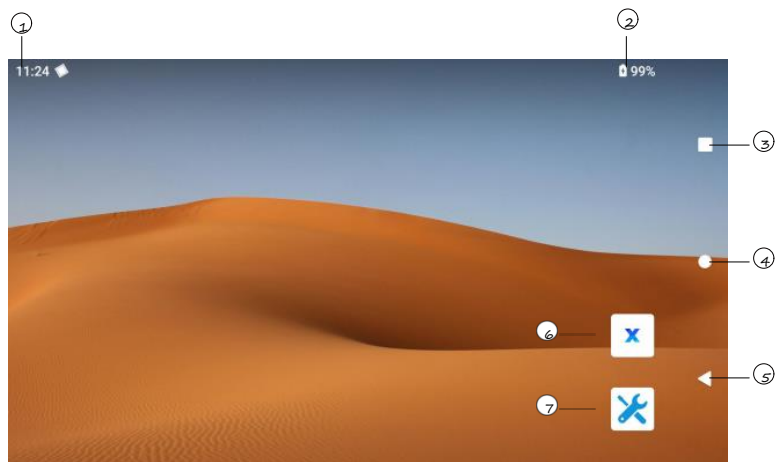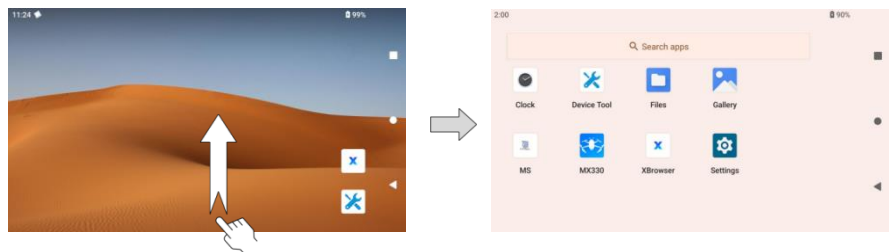


switch on                                        off

## 2. System Desktop



| Number | Annotation | Number | Annotation |
|--------|------------|--------|------------|
| 1 | Time | 5 | Back to operations |
| 2 | Battery level display | 6 | XBrowser |
| 3 | Task Centre | 7 | Device Tool |
| 4 | Back to desktop | | |

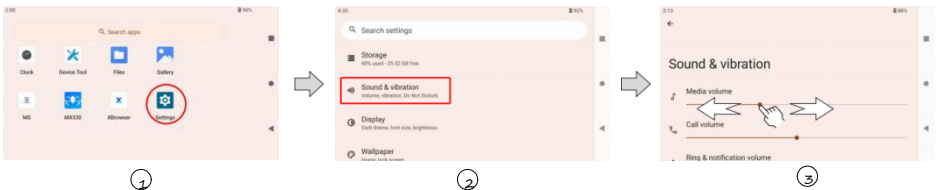Swipe up from the bottom edge of the screen to access the Apps screen.

### 3. Adjust Brightness

Swipe down from the top of the screen to enter the control centre, drag the slider to adjust the screen brightness.
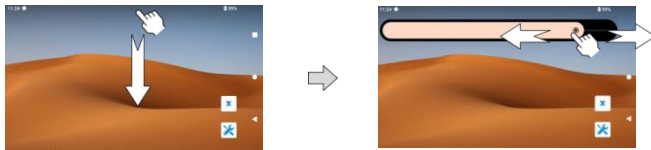


### 4.Adjust Volume

Enter the app interface, tap Settings, find the Sound&vibration, drag the slider to adjust the volume level.
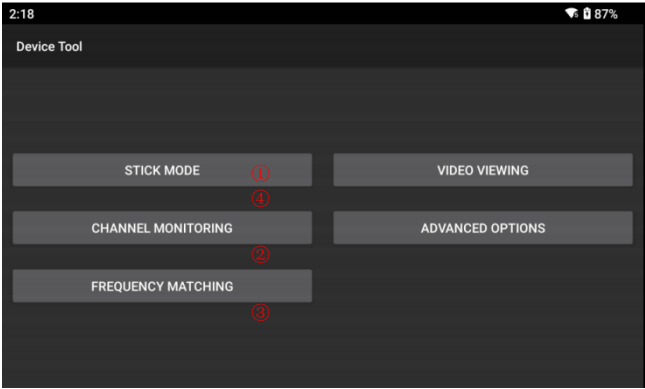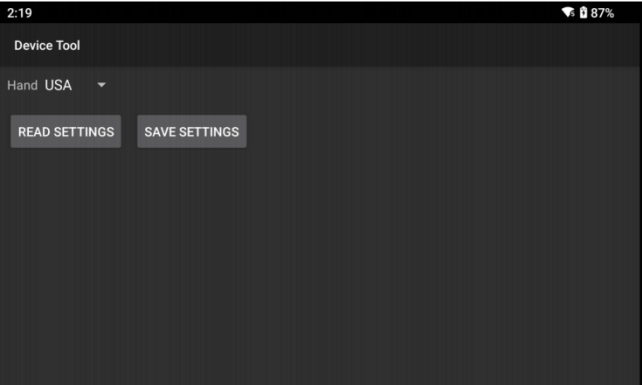


### 5.Language Settings

Click Settings > select System > select Language&Input > click Languages > select Add a language > drag the language you want to set to the first place to modify the system language.
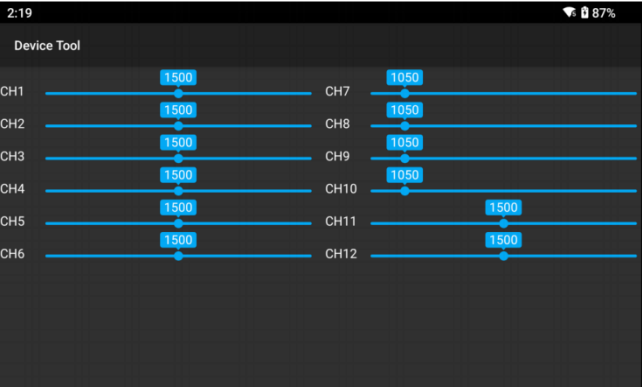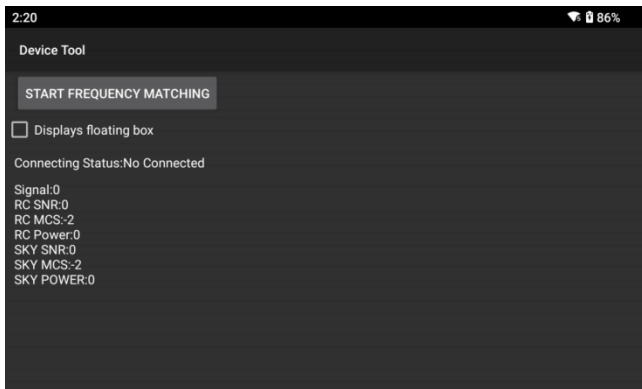
## 6.Device Tool introduction



①STICK MODE: you can set the hand shape of the remote control, default USA hand.



② CHANNEL MONITORING: you can view the real-time rudder value of each channel of the remote control.
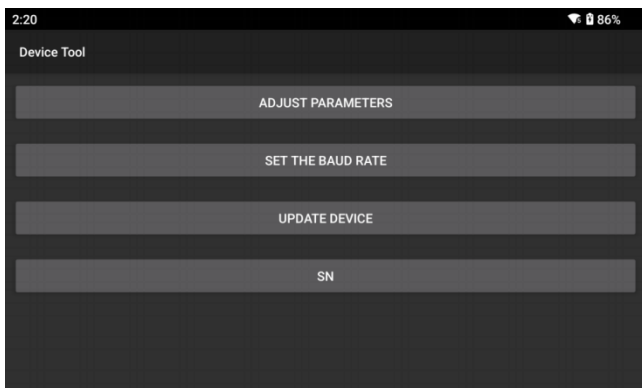
③FREQUENCY MATCHING: you can view the frequency matching status and frequency matching information.
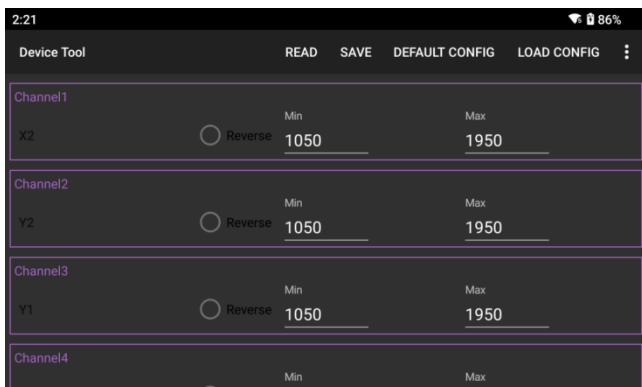


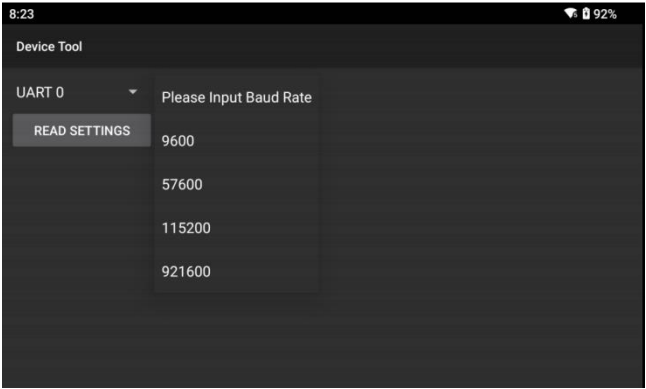④VIDEO VIEWING: you can view the video returned by the camera.

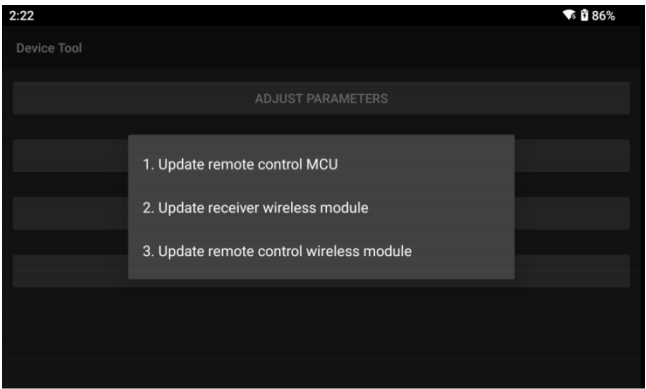**7.Device Tool-Advanced options (password 999)**



①ADJUST PARAMETERS: You can customize the key channel, set the Reverse and modify the maximum and minimum values of the rudder.
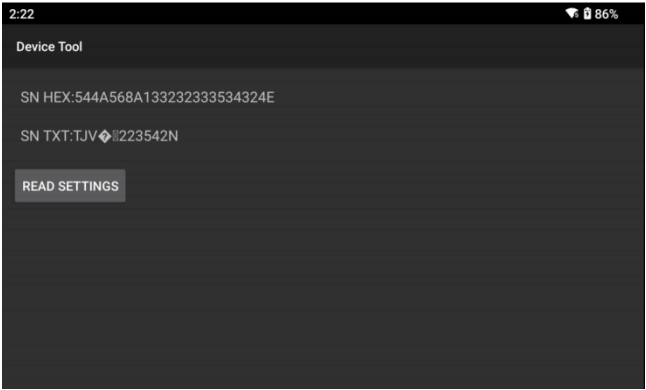
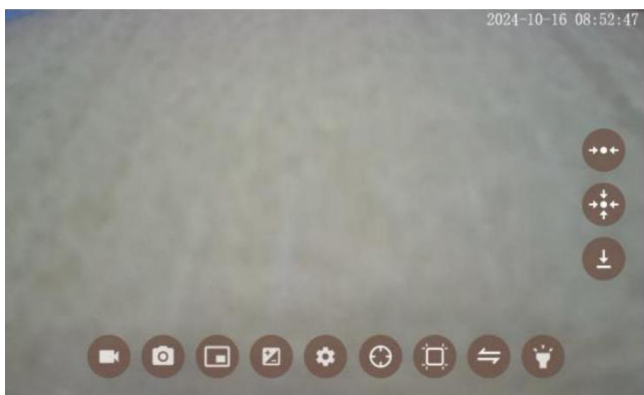② SET THE BAUD RATE: modify the receiver serial port baud rate.



③UPDATE DEVICE:Upgrade MCU firmware and wireless module firmware.



④ SN: remote control to view SN.

**1. Mapping**



Take C10Pro as an example, the camera is powered and connected to the receiver's network port, open the gimbal FPV to see the mapping screen;

If you use a third-party camera, the camera network segment needs to be set to the 144 network segment (192.168.144.XXX), open the Device Tool - video viewing

--click the setup button below - video stream address - customize, and enter the RTSP streaming address of the camera.

<span style="color:red">Note:</span> Third party camera RTSP address need to ask the manufacturer for it.

If FLY GCS is used, then in the Common Settings - Other Settings - User Interface - Video Window - C10
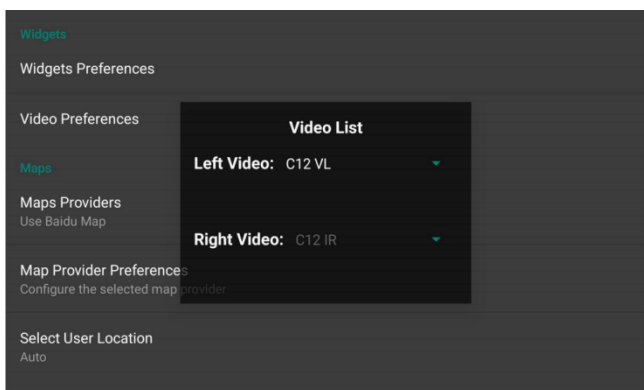


Way 1: Open Settings -> Network and Internet -> Hot-spot and Network Sharing -> WLAN Hot-spot -> Turn on 'Use WLAN Hot-spot' .

**2.Data Transmission**

Take Skydroid FLY GCS as an example. Enter the ground station, click on the upper left corner, and then enter the Switch Connection interface.
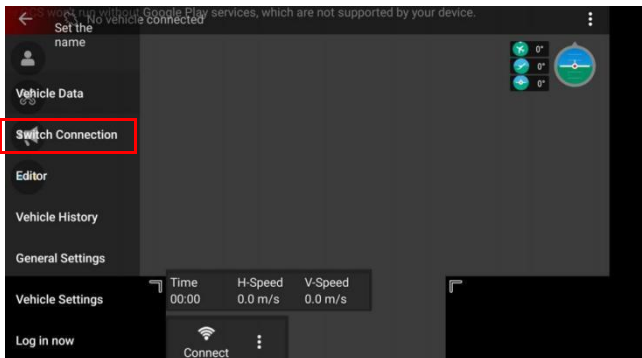


Select the combination of S2 + G12 and click to enter it, and then click "Connect".
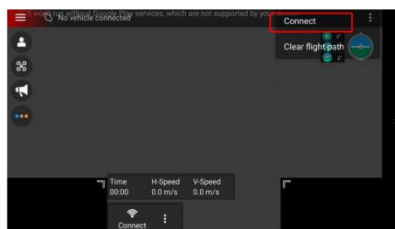


**Note:** If the connection is unsuccessful, please check the following:

①Whether the serial port baud rate of the receiver is consistent with that of the flight controller's data transmission port;

| G12 Remote Control Parameters | | | |
|---|---|---|---|
| Display | 5.5 inch high brightness screen | Resolution | 1920*1080 |
| Processor | Qualcomm 6nm processor | Computer Type | Android 13 |
| Size | 194.3(L)*282.2(W)*94.9(H)mm | Weight | 683g |
| Battery | 10000mA/H | Endurance | 4~8 hours |
| Operating Memory | 4G | System Storage Memory | 64G |
| Operating Frequency Band | 2.4G/5.8G | Channels Number | 12 |
| Dynamic FM | Automatic frequency hopping | RF Power | 23dBm@CE/FCC |
| Remote Control Distance | 5-20KM((ground-to-air, visual） | Operating Temperature | -10℃~55℃ |
| Charging Interface | TYPE-C | External Interface | Serial port, USB port, TYPE-C |

## V. Maintenance and servicing

Storage for not using certain period

Store the remote control in a dry and ventilated place with less direct sunlight to prevent the battery from overheating. If you need to store the remote control for more than three months, the recommended storage temperature range is 22 ℃ to 28 ℃. Do not store the batteries at temperatures below -20 ℃ or above 45 ℃.

## VI. Transport, storage

WARNING

To avoid possible injury and damage, be sure to observe the following items:

Always keep children away from the parts of the remote control as the wires and small parts may pose a danger to them.

CAUTION

1) Do not immerse the remote control in water. If it is immersed in water, wipe it promptly with a soft dry cloth and switch off the power immediately.

2) Do not mechanically hit, crush, or puncture the battery, or drop the battery.

**FCC Warning:**

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.

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

§15.105 Information to the user.

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.

SAR Body-Support Operation

This device was tested for typical body-support operations. To comply with RF exposure requirements, a minimum separation distance of 0cm must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-support accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

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