



**ROYOLE**  
User Manual



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## Bluetooth®

Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Royole is under license. Other trademarks and trade names are those of their respective owners.

## FCC Compliance 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 to this unit 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.

### **Specific Absorption Rate (SAR)**

This device is also designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA).

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. This model (FCC ID: 2AGVM-RY0102) has also been tested against this SAR limit.

### **California Battery Charger Energy Efficiency**



## EU Declarations of Conformity



This product compliances with the requirements of the following Directives and carries the CE mark accordingly. R&TTE Directive 1999/5/EC, RoHS Directive 2011/65/EU, Eco-design requirements for energy-related products Directive 2009/125/EC.

## Specific Absorption Rate (SAR)

This apparatus is also designed to meet the requirements for exposure to radio waves established by the EU.

The SAR limit of EU is 2.0 W/kg averaged over ten grams of tissue. This apparatus has also been tested against this SAR limited.



**Correct Disposal** of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

### Warning

Do not expose the apparatus to rain or moisture.

Do not expose the apparatus to open flames, such as lighted candles.

Do not expose the apparatus near any heat sources such as radiators, heat registers, stoves, or other apparatus (including) that produce heat.

Do not expose the apparatus to dripping or splashing, and do not place objects filled with liquids, such as vases, on the apparatus.

Do not expose the apparatus to excessive heat.

Do not move the apparatus by dragging the cable.

## Important Safety Instructions

- 1) Read these instructions—**All** safety and operating instructions should be read before.
- 2) Keep these instructions—The safety and operating instructions should be retained for future reference.
- 3) Heed **all** warnings—**All** warnings on the apparatus and in the operating instructions should be adhered to.
- 4) Follow **all** instructions—**All** operating and use instructions should be followed.
- 5) Clean only with dry cloth.
- 6) Only use attachments/accessories specified by the manufacturer.
- 7) Unplug the apparatus during lightning storms or when unused for long periods of time.
- 8) CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that specified in the operating instructions unless you are qualified to do so.
- 9) Refer **all** servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, device has been dropped.
- 10) The direct plug-in adapter is used as the disconnect apparatus, the disconnect apparatus shall remain readily operable.
- 11) CAUTION: The battery is irreplaceable. Please dispose of battery in an environmentally-friendly manner.
- 12)  To prevent possible hearing damage, do not listen at high volume levels for long periods.
- 13) The apparatus shall be used in tropical and moderate climates.
- 14) The batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.
- 15)  This apparatus is a Class II or double insulated electrical appliance. It has been designed in such a way that it does not require a safety connection to electrical earth.

- 16) This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

### **Warning**

To reduce the risk of electric shock, do not remove cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.



- 17)  Use only power supplies listed in the user instructions.

## Health precautions

### Age limit

Children should only use the device under the guidance of a parent or guardian.

### Adverse reactions

Some individuals may experience discomfort when using the device, including eye strain, fatigue, nausea, and dizziness. We recommend taking regular breaks during use, the specific duration and frequency of which is dependent on each person's condition. Should you experience any discomfort, please stop using the device immediately and consult a physician where necessary.

### Prolonged exposure to high volume

Listening to high volume sound for prolonged periods may damage your hearing. Please choose a suitable volume to protect your ears.

### Initial volume

To avoid sudden exposure to huge volume of sound, please keep initial volume low, and then gradually increase the volume to an expected level.

### Proper Wearing

To avoid a twisted viewing position, please ensure that the screen falls in your line of sight. For detailed instructions, please refer to the quick start guide.

During use, avoid prolonged skin contact with the device's processor module, battery module, or adapter, as this could result in low-temperature burns. The device has a recommended inter-pupillary-distance (IPD) range of 58mm - 70mm. Please do not use the device if your IPD is not within this range.

The diopter adjustment range is: 0° to 700° myopia and 0° to 200° hyperopia. If your eyesight reading falls inside this range and without astigmatism, you have no need to wear glasses when using the device. Otherwise you will need glasses, and this may have an adverse effect on your viewing experience.

## Usage

### Power adapter

Do not use any power adapter or USB cables other than specified types. Otherwise it may cause the device to malfunction, or even cause damage.

Do not disassemble or modify the power adapter.

Do not touch any metal part of the adapter when in use. In particular, do not use any metal tools, as these could short-circuit the adapter and cause damage.

Do not connect the device to USB hubs or extension cables.

Connect the device to an easily-accessible mains socket. If anything abnormal shows up, turn off the power supply immediately and then unplug the device.

### Internal battery

The device uses an internal battery which cannot be replaced.

You should charge the device at least once every six months to avoid damaging the battery, even if the device has not been used. Do not store the device for long time when battery ran out its power.

### Connectivity

The device uses the 2.4GHz bands and supports DSSS, HFSS, and OFDM modulation.

If there are too many 2.4 GHz devices in the area, the wireless communication performance of this device may be compromised by the interference.

Do not use the device in locations where wireless use is prohibited or restricted, such as airplanes or blasting sites.

To avoid wireless interference, please follow the instructions below:

Do not alter the device's radio frequency, increase transmission power (include installing additional RF power amplifiers), connect to external antenna, or switch to other transmission antenna.

The device must not interfere with any legally registered radio services. If such interference occurs, please stop using the device immediately.

## Usage

### Condensation

Moisture in the air can condense to form droplets on the device's metal surfaces, or other parts of the device.

Condensation may form on the surface of, or inside the device if it is moved from a cold environment to a warm one, or if the device is in a cold room with a heater turned on.

If there is dew water, please wait for it to dry completely before use, or it may cause damage.

If the device is not plugged in to a power socket, please leave it unplugged until it is completely dry.

If the device is switched off, please do not turn it on until it is completely dry.

If the device is switched on, please leave it on until it is completely dry.

### Static electricity

In dry seasons, you may experience a tingling feeling while wearing or touching the device. This may be resulting from a discharge of static electricity that has built up in your body, rather than a problem with the device.

## Maintenance and care

Please avoid rough handling, dissembling, modification of or impact to the device, such as by hammering, dropping or stampeding.

Keep the device dry and avoid exposure to extreme temperatures or shocks/vibrations. Keep the device away from hazardous chemicals and strong magnetic fields. Do not attempt to disassemble or modify the device.

The ear pads may deteriorate after prolonged periods of use or storage.

### Lens care

Ensure the lenses are not scratched or stained and keep them clean for clear visibility.

To clean the lenses, wipe them gently with the lens cloth that came with the package. You can use a damped lens cloth. The lens cloth can be with small amount of water.

Do not use organic solvents such as alcohol and acetone to clean the lenses as these could cause corrosion.

Do not apply excessive vibration or force to the lenses. Using a device with broken or fractured lenses could result in bodily injury.

If a lens is broken or fractured, please stop using the device immediately and seek a replacement.

### Cleaning the device

Use a soft cleaning cloth that dipped in mild detergent solution to wipe the surface of the device.

Do not use solvents such as thinner, gasoline, or alcohol to clean the device as these may damage its surface.

## Connection



You can use a Micro HDMI adapter and HDMI cable to connect the device to an external device such as a computer, Internet TV box, games console, or cable-TV box. Once connected, the images from the connected device will be displayed on the window.

### Micro-USB

Use a computer to transfer data.

Read data from USB storage devices.

Connect USB peripherals to the device.

### Bluetooth®

Connect to other Bluetooth devices (such as controllers, keyboards, and pointing devices).

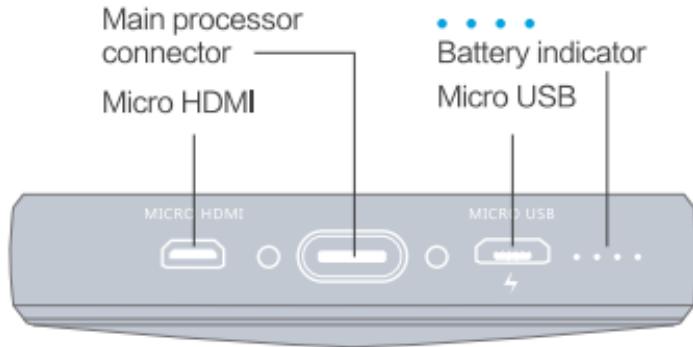
Transfer photos, music, short videos, and other documents.

### Connectivity

Connect wirelessly to the Internet and access network resources.

## Connectors and buttons

Power button		On/off switch
2D/3D button		Enable or disable 3D mode
Micro USB		Charging/data transfer/peripherals connection
Micro HDMI		Audio/video output
Home/Menu buttons		Press once to return to the home page or press and hold to open the menu.
Headset connector		only for royo head mounted display

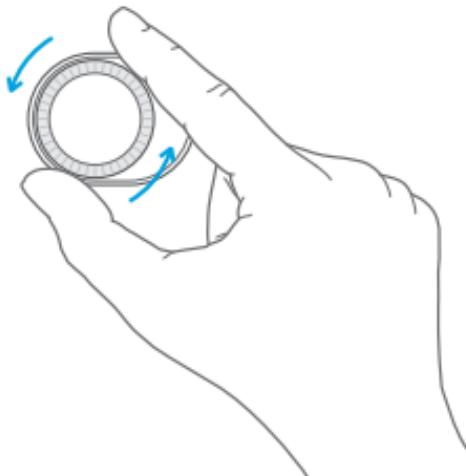


## Display configuration

Adjust the diopter dial and pupil distance setting to align the image and bring the display into focus.

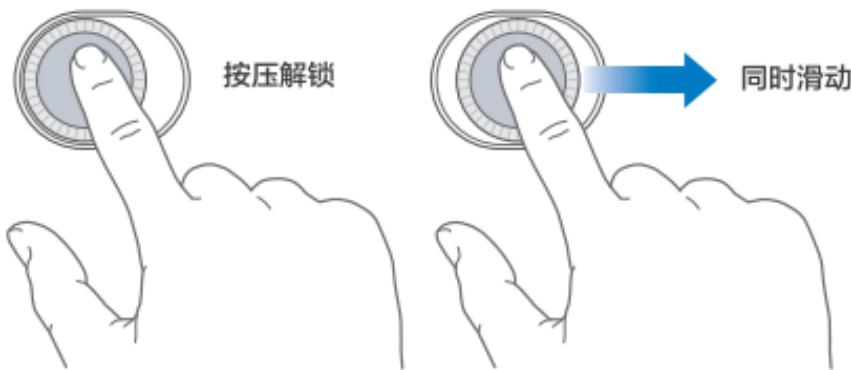
### Adjust the diopter dial for the **left/right** eyes

Adjust the left/right diopter dials until the image looks sharp.



### Adjust **left/right** eye pupil distance

Press down the pupil distance adjustment buttons to adjust the distance between the lens units until the image is aligned.



## 3D

### 3D mode

The device features a 3D mode.

## ANC

### Active noise reduction

The device features high-definition audio and active noise-reduction technology.

## Device standby

By default, the device will enter standby mode if it is not used for 5 minutes.

## Charging

The battery must be charged before first use of the device, or when the battery is low or depleted.

Storing depleted battery for a long time may result in damage, please make sure it is charged within 7 days after it is depleted.

Please charge the device indoors with the provided power adapter and USB cable.

When charging, ensure that the USB connector is securely inserted into the power adapter before plugging in to the mains socket.

When charging, do not use damaged cable, mobile power bank or adapter, or expose the battery to high temperature, moisture, or direct sunlight. Failure to observe the above could result in fire, electric shock, bodily injury, or damage to the device or other properties.

Charging or using the device in an explosive environment is dangerous. If you are in an environment where there are explosive chemicals, steam, or fine particles in the air, please observe hazard warning signs and safety instructions.

When charging, the power indicator light will switch on. Once the batteries are fully charged, the indicator will remain on until the power adapter is unplugged.

You may charge the device while using it, but this requires longer charging time. Therefore, it is recommended to charge the device when it is not in use.

Depending on ambience temperature or other usage conditions, the device may not be charged properly or require longer time to be fully charged. It is recommended to charge the device at room temperature. It is normal for the battery module and power adapter to heat up during charging. However, if the battery module or power adapter becomes very hot, please stop using the device, turn off the power, and place it in a safe place. You should then contact the customer service.

When charging is complete, please remove the USB connector and unplug the power adapter from the mains.

Never try to replace the device's internal battery by yourself. This can damage the battery, and could even cause overheating or bodily injury. The internal battery should only be replaced by Shenzhen Royole Corporation or another authorized service provider.

At the end of its service life, the device should be disposed separately from household rubbish.

Please do not burn the battery.

## Specifications

### Display device

Screen sizes	800-inch screen at 20 meters
Resolution	1920 x 1080
Pupil distance	58 – 70mm
Diopter	0° to 700° myopia and 0° to 200° hyperopia
Operating temperature	0–45°C
Storage temperature	-20 – 60°C
Operating humidity	≤90%RH
Storage humidity	≤90%RH

### Headphones

Noise cancellation mode	Active
Maximum noise cancelation magnitude	>22dB
Distortion	<1%@94dB,1KHz
Sensitivity	105±3dB/mW@1KHz
Frequency response	8–22KHz
Impedance	300Ω (With noise cancelation) ± 10%

## Main device

Dimensions	133.6 x 66.6 x 14.8mm
Battery capacity	6000mAh
Power consumption	5W
Operating time	5h
Charging time	About 95% (Charging time 2 hours)
Input port	Micro HDMI, Micro USB
Connectivity	IEEE802.11/b/g/n BT2.1 + EDR/ BT3.0

## Power adapter

Nominal input	100–240VAC 50/60 Hz 0.8A Max
Nominal output	DC 5V, 2A/DC 12V, 1.5A
Operating temperature	0–45 °C
Storage temperature	-20 – 60 °C
Operating humidity	≤ 90%RH
Storage humidity	≤ 90%RH
Brand / Model	ROYOLE RY0006(US) ROYOLE RY0007(EU) ROYOLE RY0008(UK/HK)



3D Virtual Mobile Theater

For more information, [\(+86\)755-8632-9192](tel:+8675586329192) / [www.royole.com](http://www.royole.com)  
Model:RY0102 Made in China

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