

# **BIO BS5+**

*Handheld Digital Medical Otoscope*

## **User's Manual**



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## 1. General

BIO scope BS5+ is a digital handheld scope used to record digital photographs and videos with different lens.

Otoscope lens: examine ear's canal and tympanic membrane

Rhinoscope lens: examine nasal cavity

Laryngoscope lens: examine throat

## 2. Scope

The medical scope is mainly used in hospital, Clinic and medical departments for doctors and nurses to examine ear, nasal and throat.

## 3. Components

The medical scope BS5+ includes CMOS camera (with lens), fiber optic, LED bulb, 3.5 inches LCD screen, Rechargeable Battery, SD card and cables.

## 4. Specifications

Resolution: 720 x 480

Light source: Natural white (LED)

LCD screen: 3.5 inch high-definition LCD

Image format: JPEG, BMP

Media: Micro SD flash card

Power supply: rechargeable lithium battery

External power: 110~220 VAC, 50/60 Hz

Charging time: 5 hours

## 5. Operation Environment

Ambient temperature 10°C to +40°C

Relative humidity ≤ 80%

Atmospheric pressure 860hPa ~ 1060hPa

## 6. Storage Environment

Ambient temperature -40°C to +55°C

Relative humidity range 10% to 100%, Including condensation

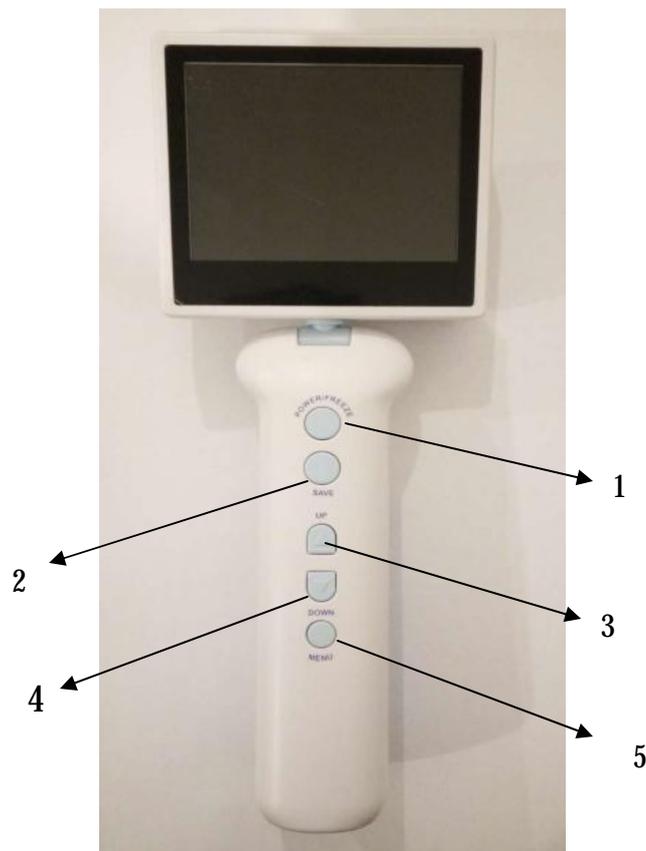
Atmospheric pressure 50KPa ~ 106KPa

## 7. Operating instructions

- I Before operation, please make sure the appearance is not damaged or broken. If there are breaks in the device cover or other visual defects, please contact BIO service.
- I Take the lens and attach it on the handheld main unit. Rotate and fasten Lens in a clockwise direction.
- I Insert the SD card to the main unit.
- I Before the first use, connect USB connector to the power plug. Let the battery charged for fully charge.

Note: Please pull the power plug before using, avoid using while charging.

- I The user interface as following picture. Can be used to record digital photographs and videos. If want to delete the images and videos, select the format on the menu.



- (1) Botton 1: Power on/off and freeze
- (2) Botton 2: Short press to take photo  
Press and hold to record video

(3) Botton 3: Up

(4) Botton 4: Down

(5) Botton 5: Menu and set-up

– To review pictures and set up parameters such as dates and language.

Put the camera lens into slot



Turn the screw cap to the right until it has been tighten



SD Card Slot

USB Charging Port AV Out

## How to operate?

1. Please install the camera lens, tight the nut and insert the SD Card before using the device.

Kindly fully charging and unplug the charger before first time usage.

2. Press 'POWER' button, power on the inspection camera, align the patients' part which need to be inspected to make the image clear.

Press 'FREEZE' button to freeze the image, Press 'FREEZE' button again to continue taking photos. Press 'SAVE' to save images took.

Press 'UP' and 'DOWN' button to view images above/below.

Press 'MENU' to set up functions such as images replay, languages settings, continuous shooting, record video and so on.

Press and hold 'POWER' button to power off.

3. Remaining Battery Capacity shows on the screen. Please connect the charger to charge when Low battery capacity.

Noted: The device does not work when charging: If you turn on the Power switch when charging, the screen indicates the charging status, function is not available.

## 8. Troubleshooting

The possible causes of occurred errors and solving methods are listed below:

| Errors  | Possible Cause                                 | Solutions   |
|---|--|---|
| The scope is with fully charge, but not working.  | The battery reaches lifetime or failure        | contact the manufacturer or distributor to buy the spare battery. |
| The scope has power, but no image                 | CMOS damage, or circuit board fault            | contact the manufacturer or distributor to repair                 |
| The freeze button or the other button not working | Button damage, or circuit board fault          | contact the manufacturer or distributor to repair                 |
| The camera lens no light source                   | LED light source damage or circuit board fault | contact the manufacturer or distributor to repair                 |

## 9. Cleaning and Disinfection

The BIO Scope is a precision photo electronic instrument that shall be cleaned and sterilized regularly. Please note following cleaning instructions:

- I Power off the BIO Scope before cleaning it.
- I Sterilize the handheld main unit with the soft cloth with 40% diluted alcohol.
- I Clean the screen with soft cloth moistened with water. Do not use alcohol, diluents and detergent.
- I It is recommended to clean the optical lens with cleaning cloth or lens cleaning tissue.

## 10. Notes and Warnings

- I Do not place any objects on the scope, and don't let any liquid flow into the scope.
- I To prevent fire or electrical shock, do not expose the scope to rain or moisture. Do not use the scope in flammable, explosive gas environment
- I For the optional lens, avoid knocking, touching sharp objects and scratching. Or the images effect will be affected.
- I When using rhinoscope lens, gently insert into the nose canal and have to keep a safety distance between the specula and Nasal membranes. Do not make the lens contact with nose's Nasal membranes.

## 11. Warranty

- I The warranty of medical scope is 12 months since exportation date.
- I Natural disasters, man-made damage, lack of reasonable care, disassembly, and warranty sticker had been torn up or phase-out parts are not included in the warranty.

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