

An instruction of otoscope for otolaryngologist. It is an internally powered device. Please read through this brochure before use, and keep it handy for future reference.

Symbols:

	Manufacturer
	Authorized Representative in the European community
	Symbol for the marking of electrical and electronics devices according to Directive 2002/96/EC. the device, accessories and the packaging have to be disposed of waste correctly at the end of the usage. please follow Local Ordinances or Regulations for disposal.
	Type B Applied Part
	Attention, consult accompanying documents

SAFETY INFORMATION

To assure the correct use of the product , basic safety measures should always be followed including the warnings and cautions listed in this instruction manual.

Warnings & Cautions:

- Do not use the device where it may be exposed to flammable gas.
- Protect this device from water, moisture, impact, dropping, direct sunlight, heat and fire.
- Do not touch the lens directly by hand or something hard.
- Please use the bulb type specified in this instruction brochure.
- Keep the device out of the reach of unsupervised infants and children.
- Do not disassemble or attempt to repair the device or components.

GENERAL

Description:

The otoscope is a classic medical device in ENT.HS-OT10C-2 adopts the total reflection of optical fiber, and make the light path and observation of light tend to be coaxial through the optimization design, which increase the visual field of view. It is used to view the tympanic membrane and external ear canal to diagnose outer and middle ear pathologies.

Technical Specifications:

HS-OT10C-2

- 3X magnification for the viewing window.
- Enhanced XHL Xenon Halogen Technology/ LED Technology.
- 107 bulb & 109 LED bulb used. (Optional parts)



- Fiber optic illumination.
- An insufflation bulb for pneumatic testing.
- Double charger unit.
- AA Ni_Mh2.4V (&116) rechargeable battery.

HOW TO USE THIS DEVICE

- Turn on (or off) the device by pushing downwards (or upwards) as fig.1:
- Select a reasonable tip for patient's ear canal and push it onto the head and screw the tip clockwise, refer to fig.2. Generally, the tip size of 4mm is for adults and 2.4mm is for children:
- Put the otoscope with a tip into the ear canal of patient (fig.3), and examine through the viewing window which is with 3X magnification.



fig.1

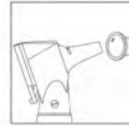


fig.2

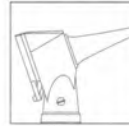


fig.3

Attention:

- The otoscope should only be used to examine ear when a tip is fitted.
- It is an intermittent operated device, 1 minute ON, 5 minutes OFF.

MAINTENANCE

Changing Spare Parts:

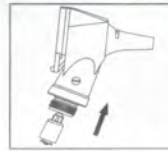


Fig.4



Fig.5

1.Changing the bulb (fig.4)

- Turn off the power and unscrew the head from the handle of device;
- Pull the old bulb downwards, and replace with new one;
- Screw the head back on to the handle.


Attention:

- Please use the specialized bulb (Model:&107 or &109) for this device.
- After the bulb burns out, the temperature will remain high for approximately 5 minutes. Please wait for a moment to avoid injury.

2.Changing the rechargeable batteries(fig.5)

Unscrew the battery cap. Insert the rechargeable battery into the handle with the plus (+) end up and cover with the cap. Replacement rechargeable batteries(&116)are available from the manufacturer.

Attention:

- When using a rechargeable battery, ensure that the plus(+) pole is up and the minus(-) is down, and is in contact with the battery cap.
- Do not leave worn batteries in the handle.
-  Batteries should be disposed of in accordance with local regulations.

Cleaning and Disinfection:

- Clean the surface of device with 75% alcohol solution at least once a week, avoid to touch the viewing window. And corrosive or polishing detergent is prohibited.
- Disinfect the tips of otoscope with saturated steam for 20 minutes at 134°C.

Attention:

Do not soak, autoclave or let water dip into the device!

HOW TO CHARGE

Charging For The Battery As fig.6



Fig.6



fig.7



fig.8

- The Charger can be supplied by computer USB power or power adapter (D.C 5V) (fig.7,fig.8)
- Adopt trickle charge to ensure extended battery life.
- The two handle products can be charged by the device at the same time.
- Normal it is 10 hours to recharge AA Ni_Mh2.4V rechargeable battery.

Charging the battery:

- Insert the rechargeable handle into the charger and connect the power source of power adapter or computer USB power, then the blue circular indicator light will be illuminated. It signals the charging mode.
- While the red circular indicator light be illuminated , It signals the end of charging.
- The product in use process can use this charger, even hasn't run out of battery. This will not harm the device or the battery.

Attention:

- Ensure that the device ON/OFF button is closed while charging.
- Please charging full of the battery every two months if long time no use.

PERIODIC SAFETY CHECKS

Preventive inspection and maintenance to be performed including the frequency of such maintenance. The following safety check should be performed at least every 12 months by a qualified person who has adequate training, knowledge, and practical experience to perform these tests.

- Inspect the equipment and accessories for mechanical and functional damage.
- Inspect the safety relevant labels for legibility.
- Verify that the device functions properly as described in the instructions for use.

ELECTRICAL CLASSIFICATION

Equipment Classification with respect to protection from electric shock: Internally powered equipment.

Degree of protection from electric shock: TYPE B.

Equipment not suitable for use in the presence of flammable mixture: Yes.

Mode of operation: intermittent operation.

The manufacturer reserves the right to make technical changes without notice in the interest of progress. Prior notices will not be given in case of any amendments within this manual.

SPECIFICATIONS

illumination	Fiber Optic Illumination	
Luminance	24 Lumen	
Specified Bulb	Xenon Halogen bulb	LED bulb
	Model: &107 2.5V, 750mA	Model: &109 3.0V, 80mA
Color Temperature	3050K±5%	3200k or 6000K±5%
Battery	AA Ni_Mh 2.4V Rechargeable battery	
Charging dock	Input	DC5.0V ≐ 500-1000mA
	Output	DC3.0V ≐ 500mA
Operation	Temperature	10℃~35℃
	Humidity	30%~75%
	Air pressure	700hPa~1060hPa
Storage & Transport	Temperature	-20℃~70℃
	Humidity	10%~90% (Without condensation)
	Air pressure	500hPa~1060hPa



Direct Ophthalmoscope INSTRUCTION MANUAL

An instruction of ophthalmoscope for ophthalmologist. It is an internally powered device. Please read through this brochure before use, and keep it handy for future reference.

Symbols:

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	Type B Applied Part
	Attention, consult accompanying documents

SAFETY INFORMATION

To assure the correct use of the product , basic safety measures should always be followed including the warnings and cautions listed in this instruction manual.

Warnings & Cautions:

- Do not use the device where it may be exposed to flammable gas.
- Protect this device from water, moisture, impact, dropping, direct sunlight, heat and fire.
- Do not touch the lens directly by hand or something hard.
- Please use the bulb type specified in this instruction brochure.
- Keep the device out of the reach of unsupervised infants and children.
- Do not disassemble or attempt to repair the device or components.

GENERAL

Description:

Direct ophthalmoscope (hereinafter :device) is a classic medical device for ophthalmology. This device adopt a professional lens system.

Which make doctors conveniently get a clear visual field for examining the interior structures of eyes, such as dioptic media etc.

Technical Specifications:

HS-OP10C-2

- Enhanced XHL Xenon Halogen Technology/ LED Technology.
- 106 bulb & 206 LED bulb. (optional parts.)



- 5 different apertures.



- Range of lenses: -20D to +20D

+	1	2	3	4	6	8	10	15	20
-	1	2	3	4	6	8	10	15	20

HOW TO USE THIS DEVICE

- Turn on (or off) the device by pushing downwards (or upwards) as fig.1:
- Scroll the diopter wheel in two directions as fig.2 to select a suitable diopter, which helps to get a clearer observation vision for user ;
- Scroll the diaphragm wheel as fig.3 for getting a needed aperture ;
- Diagnose by aiming the light to the patient's eye as fig.4.



fig.1

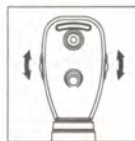


fig.2



fig.3



fig.4

Attention:

It is an intermittent operated device.1 minute ON, 5 minutes OFF.

MAINTENANCE

Changing Spare Parts:



Fig.5



Fig.6

1.Changing the bulb (fig.5)

- Turn off the power and unscrew the head from the handle of device;
- Pull the old bulb downwards, and replace with new one;
- Screw the head back on to the handle.

Attention:

- Please use the specialized bulb (Model:&106 or &206) for this device.
- After the bulb burns out, the temperature will remain high for approximately 5 minutes. Please wait for a moment to avoid injury.

2.Changing the rechargeable batteries(fig.6)

Unscrew the battery cap. Insert the rechargeable battery into the handle with the plus (+) end up and cover with the cap. Replacement rechargeable batteries(&116)are available from the manufacturer.

Attention:

- When using a rechargeable battery, ensure that the plus(+) pole is up and the minus(-) is down, and is in contact with the battery cap.
- Do not leave worn batteries in the handle.
- Batteries should be disposed of in accordance with local regulations.

Cleaning and Disinfection:

Clean the surface of device with 75% alcohol solution at least once a week, avoid to touch the viewing window. And corrosive or polishing detergent is prohibited.

Attention:

Do not soak, autoclave or let water dip into the device!

HOW TO CHARGE

Charging For The Battery As fig.7



Fig.7

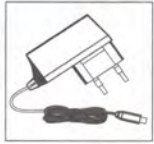


fig.8

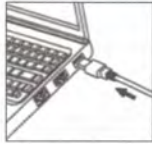


fig.9

- The Charger can be supplied by computer USB power or power adapter (D.C 5V) (fig.8,fig.9)
- Adopt trickle charge to ensure extended battery life.
- The two handle products can be charged by the device at the same time.
- Normal it is 10 hours to recharge AA Ni_Mh2.4V rechargeable battery.

Charging the battery:

- Insert the rechargeable handle into the charger and connect the power source of power adapter or computer USB power, then the blue circular indicator light will be illuminated. It signals the charging mode.
- While the red circular indicator light be illuminated , It signals the end of charging.
- The product in use process can use this charger, even hasn't run out of battery. This will not harm the device or the battery.

Attention:

- Ensure that the device ON/OFF button is closed while charging.
- Please charging full of the battery every two months if long time no use.

PERIODIC SAFETY CHECKS

Preventive inspection and maintenance to be performed including the frequency of such maintenance. The following safety check should be performed at least every 12 months by a qualified person who has adequate training, knowledge, and practical experience to perform these tests.

- Inspect the equipment and accessories for mechanical and functional damage.
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- Verify that the device functions properly as described in the instructions for use.

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Equipment not suitable for use in the presence of flammable mixture: Yes.

Mode of operation: intermittent operation.

The manufacturer reserves the right to make technical changes without notice in the interest of progress. Prior notices will not be given in case of any amendments within this manual.

SPECIFICATIONS

Illumination	Direct Illumination	
Luminance	14 Lumen	
Specified Bulb	Xenon Halogen bulb	LED bulb
	Model: &106 2.5V, 500mA	Model: &206 3.0V, 80mA
Color Temperature	3000K±5%	4000K±5%
Battery	AA Ni_Mh 2.4V Rechargeable battery	
Charging dock	Input	DC5.0V \approx 500-1000mA
	Output	DC3.0V \approx 500mA
Operation	Temperature	10°C~35°C
	Humidity	30%~75%
	Air pressure	700hPa~1060hPa
Storage & Transport	Temperature	-20°C~70°C
	Humidity	10%~90% (Without condensation)
	Air pressure	500hPa~1060hPa

