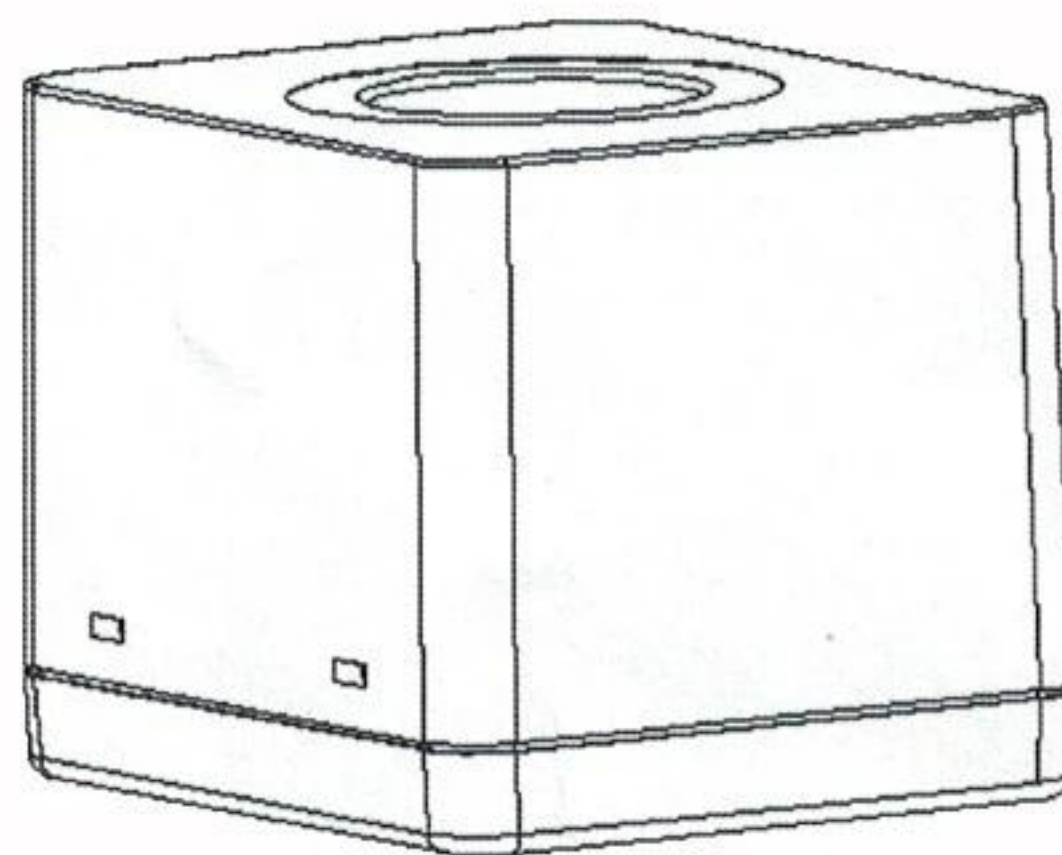
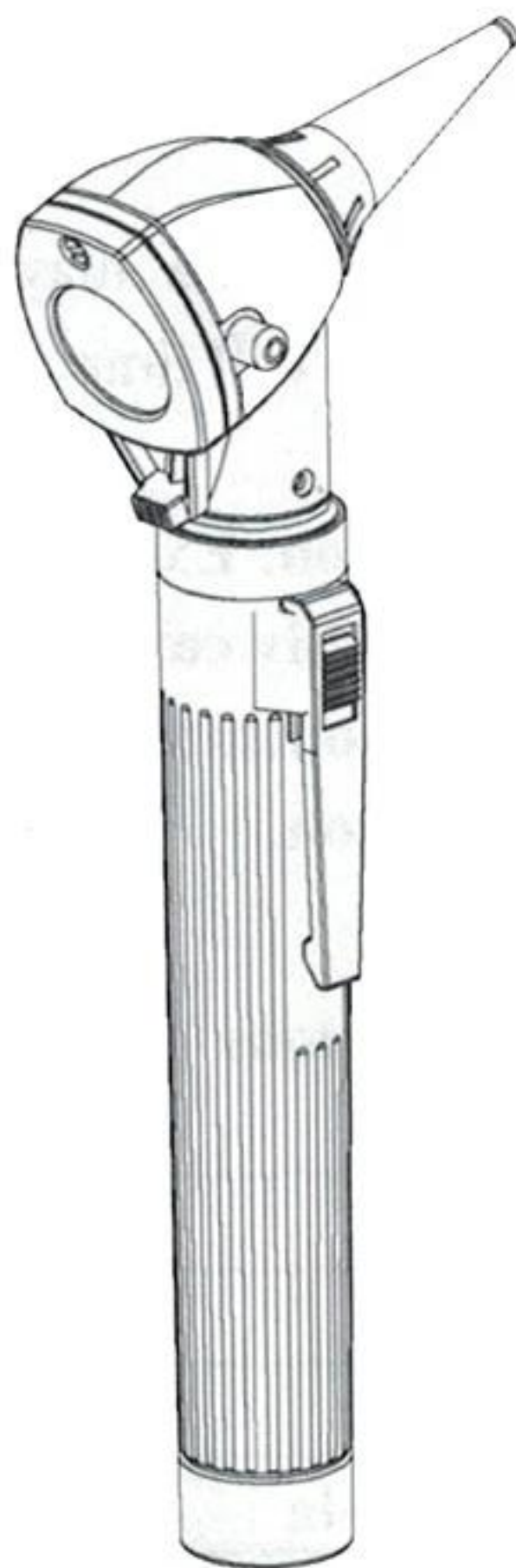
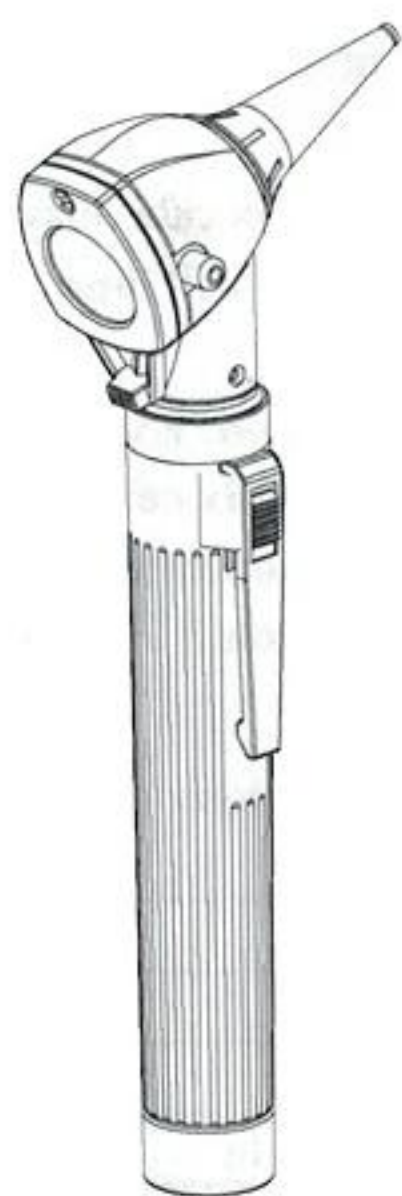

OTC-1800 ION

Otoscope Rechargeable Handle
Charger and Zipper Bag

Operation Manual



Otoscope User's Guide



Thank you for purchasing this Otoscope. To prevent damage to your otoscope or injury to yourself or to others, read the following safety precaution in their entirety before using this equipment. Keep these safety instructions where all those who use the product will read them.

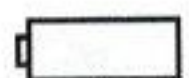
Symbols:



Consult User's Guide



Type BF applied part



Internal electrical power source



Cautions

- 1、 Read User's Guide for Cautions and Instructions for use.
- 2、 This product must not be used in the presence of flammable gases.
- 3、 This product should not be immersed in fluids.
- 4、 Please ensure that the control is in the off position when the examination has been completed.
- 5、 Disposable specula should not be used for insufflation testing.
- 6、 Federal law restricts this device to sale or order of a physician.

1.Purpose and features of the product

1.1 Purpose

Otoscope described in these instructions for Use have been produced for lighting and examination for the auditory canal, combined with a ear speculum.

1.2 Features:

- Fiber optics transmit light system
- 2.5 x magnification
- Reusable Specula: 2.5 mm and 4.0 mm
- Insufflation Port: view tympanic membrane using an insufflator bulb.
- It is available with two AA alkaline or Ni-MH batteries. The model of the bulb is T4954 (2.5 V / 1.6 W).

2. Operating Instructions

2.1 Starting and stopping

The clip on the handle is equipped with an On/Off slide. When pushing the slide(2) down, the unit is switch on ,when pushing the slide (2) up, the unit is off. Refer to Fig.1.

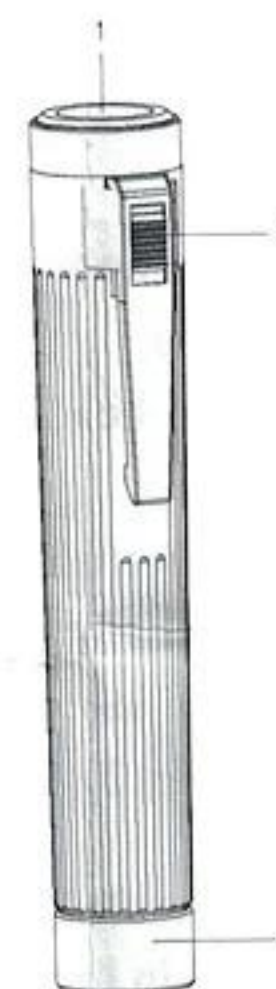


Fig.1



Caution: To minimize lamp housing temperatures, on-time should not exceed 2 minutes with off-time not less than 5 minutes.



Caution: If the handle is too hot or batteries leak, pushing the slide (2) up immediately, turn the instrument off, and take the batteries out.

2.2 Insertion and removal of ear speculum

Position the selected speculum on the chromium plated metal socked (4) of the otoscope. Turn speculum (7) to the right until a resistance is felt. The size of the speculum is marked on the reverse. Refer to Fig.2.



Caution: Before each use, the outer surface of the ear speculum should be checked to ensure there are no unintended rough surface , sharp edges.



Fig.2

2.3 Magnifying lens

The lens (5) magnifies 2.5x and can be swivelled aside for instrumentation. Refer to Fig.2.

2.4 Insufflation port

An insufflation's bulb can be fitted to the port.



Caution: The otoscope should only be used to examine the ear when an ear speculum is fitted. Pressure should be applied with great care when doing pneumatic testing.

3. Maintenance

3.1 Replacing the consumables

3.1.1 Replacing the bulb

Remove instrument head from battery handle (1). Refer to Fig.1.

The bulb is in the bottom section of the instrument head.

Remove bulb, by using your thumb and forefinger or a suitable tool, from instrument head. Firmly insert new bulb (6). Refer to Fig.2.



Caution: Only the appropriate bulb can be used in the instrument. Ensure the replacement matches the bulb being replaced.



Caution: Switch off the instrument and allow the bulb to cool before attempting to replace it.

3.1.2 Replacing batteries

Turn the instrument off. Unscrew the bottom cap(3), insert the two new batteries, check to be sure the batteries is in the correct orientation, then close the bottom cap(3).



Caution: Dispose of old batteries safely

3.2 Battery use and care

- Please use AA alkaline batteries (IEC standard reference LR6) or AA Ni-HM batteries only.
- When inserting batteries, do not attempt to insert them upside down or backwards.
- Batteries should be removed if your instrument is not to be used for long periods.

3.3 Cleaning and sterilization

Wipe all external surfaces with cloth dampened with a mild detergent and water solution, a mild detergent and water solution, a solution of 70% isopropyl alcohol and water solution, or a solution of 10% Clorox and water. DO NOT immerse. Wring out the cloth to prevent excess moisture from entering the assembly.

Clean instrument windows with a cotton swab dipped in alcohol.

The reusable ear Specula may be sterilized in 134°C saturation steam for a will time of 10 minutes.

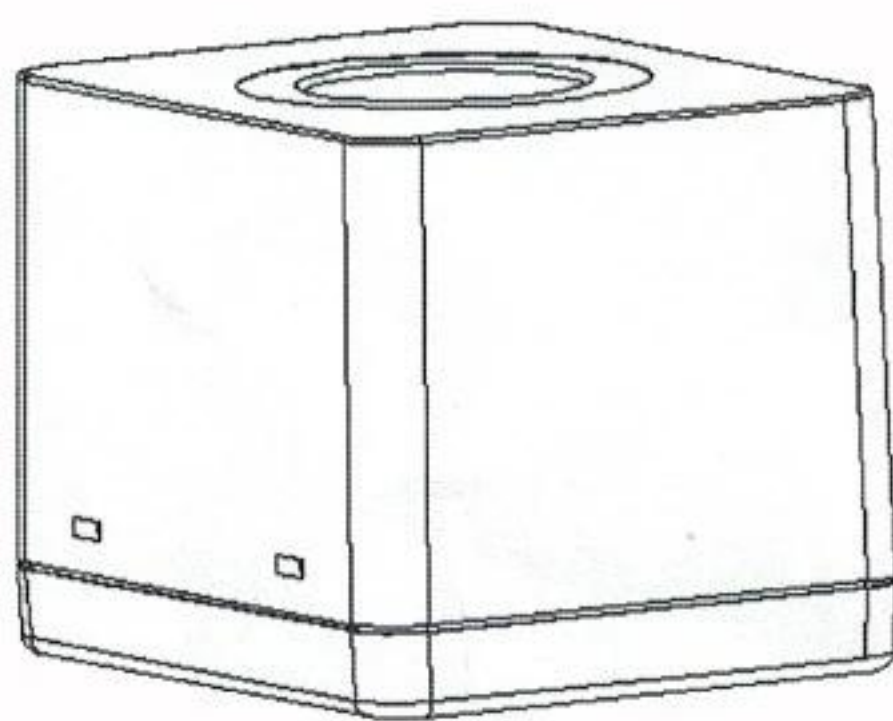


Caution: Excess solution entering the assembly could damage internal components. Use caution to ensure cwith solution.

4. Technical Specifications

Optical specifications		
Illumination		Fiber optics transmit light
Magnification of lens		2.5 x
Specifications of ear-specula		
Diameter of ear-specula		2.5 mm, 4 mm
Specifications of insufflation Port		
Insufflation Port		Yes
Electrical specifications		
Bulb	T4954	2.5 V / 1.6W
Rated voltage	Two AA alkaline or two Ni-MH batteries	
Operation mode	Intermittent: on-time should not exceed 2 min with off-time not less than 5 min	
Electrical Safety	Complying with EN60601-1 EN60601-1-2 Protection: Internal electrical power source Type BF applied part	
Environment requirements		
Operation	Temperature	+10 °C – +35 °C
	Rel. humidity	30% – 75%
	Air pressure	700 hPa – 1060 hPa
Shipping	Common conveyance	
Storage	Temperature	-40 °C – +55 °C
	Rel. humidity	10% – 90%
	Air pressure	500 hPa – 1060 hPa

Charger User's Guide



Thank you for purchasing this charger. To prevent damage to your charger or injury to yourself or to others, read the following safety precaution in their entirety before using this equipment. Keep these safety instructions where all those who use the device will read them.

Symbols:



Class II



Attention: Read user's guide for warnings and cautions and instructions for operating.

Warnings and Cautions



Attention. Read user's guide for cautions and instructions for operating.



Warning: This device must not be used in the presence of flammable gases.



Warning: This device should not be immersed in fluids.



Warning: Please use special certificated power adapter.



Warning: Federal law restricts this device to sale or order of a physician.

1. Purpose and features of the device

1.1 Purpose

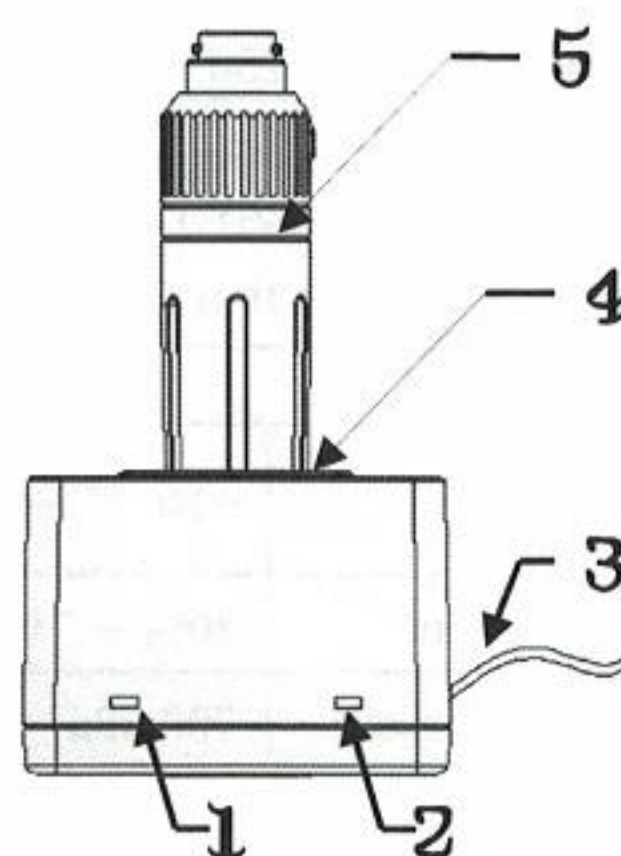
The charger is only intended to charge the rechargeable Li-ion battery handle.

1.2 Features

- Power-on indicator. Charging state indicator.
- Automatic charging when inserting the handles to charging port.
- When take the handle away, the charging state indicator automatically turns off.
- 3.7V Li-ion battery .
- Pre-charge – CC – CV Operation model.
- Circuit short, reverse-voltage ,over-voltage protection.
- Low battery indicator.

2. Operating Instructions

2.1 The lithium battery charger external diagram is as follow:



1	Power indicator	The green led lit indicate that the charger is powered
2	Charge indicator	The yellow led lit indicate the charging The green led lit indicate charging is completed
3	Power line	Connect the power adapter
4	Charging port	Insert the rechargeable Li-ion battery handle
5	Rechargeable lithium battery	Pay attention to the direction of the handle inserted.

2.2 Connecting power adapter to mains and the charger,
When the green Power led is lit that indicates that the charger is powered and ready to charge the battery.

2.3 Place the rechargeable lithium battery handle into the charging port of the charger. When the charging indicator shows yellow that indicate charging is carry on, the charge indicator shows green that indicates charging is complete.

2.4 Take the handle from the charging port.The lithium battery charger will stop charging, charging indicator light turn off.

2.5 Power adapter output: 5VDC, 2A.

3. Maintenance

3.1 Cleaning Recommendations

Wipe all external surfaces with cloth dampened with a mild detergent and water solution, a mild detergent and water solution, a solution of 70% isopropyl alcohol and water solution, or a solution of 10% Clorox and water.

DO NOT immerse. Wring out the cloth to prevent excess moisture from entering the assembly.

Clean instrument windows with a cotton swab dipped in alcohol.



Caution: Be careful to prevent the solvent into the instrument.

4. Technical Specifications

Electrical Specifications		
Input voltage		5 VDC
Input power		2A
Li-ion battery specifications		3.7 V
Charging port		1
maximum charge time		≤ 3.5 h
Power adapter specifications		
Input	100 VAC – 240 VAC 50 Hz / 60 Hz ≤ 14 VA	
Output	9 VDC – 12 VDC 800 mA –1250 mA	
Electrical Safety		Complying with EN60601-1, EN60601-1-2 Protection : Class II
Environment requirements		
Operation	Environment Temperature	+10 °C – +35 °C
	Relative Humidity	30% – 75%
	Atmospheric Pressure	700 hPa – 1060 hPa
Shipping	Common Conveyance	
Storage	Environment Temperature	-40 °C – +55 °C
	Relative Humidity	10% – 90%
	Atmospheric Pressure	500 hPa – 1060 hPa



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