NORSE RESCUE®
FINGERTIP PULSE OXIMETER

OPERATING MANUAL

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OXYO PRO

To ensure safe and proper usage of this product, please carefully read the operating manual before use and store it securely for future reference.

1. SAFETY

1.1 Safe Operation and Use of the Fingertip Pulse Oximeter

- Do not attempt to service the Fingertip Pulse Oximeter. Only qualified service personnel should attempt any needed internal servicing.
- Do not use the pulse oximeter in situations where alarms are required. The device does not have alarms.
- Prolonged use or the patient's condition may require changing the sensor site periodically. Change the sensor site and check skin integrity, circulatory status, and correct alignment at least every 2 hours.
- SpO2 measurements may be adversely affected in the presence of high ambient light. Shield the sensor area (with a surgical towel or block direct sunlight, for example) if necessary.

The following conditions or situations can interfere with the accuracy of the pulse oximeter readings, especially in the presence of defibrillators:

- High-frequency electrosurgical equipment in use nearby.
- Placement of a sensor on an extremity with a blood pressure cuff, arterial catheter, or intravascular line.
- When the patient has severe hypotension, severe vasoconstriction, severe anemia, or hypothermia.
- When the patient is in cardiac arrest or is in shock.

Fingernail polish or false fingernails may cause inaccurate SpO2 readings.

1.2 Warnings

WARNING: EXPLOSION HAZARD

- Do not use the Oximeter in a flammable atmosphere with flammable anesthetics or materials.
- Never throw batteries into fire, as they may explode.
- Do not attempt to recharge regular dry-cell batteries; they may leak and cause fires or explosions.
- Do not use the Pulse Oximeter in an MRI or CT environment.

CAUTIONS:

- Maintain a clean operating environment free of dust, vibrations, corrosive, or flammable materials, and avoid extremes of temperature and humidity.
- Do not operate the unit if it is damp or wet due to condensation or spills.
- Avoid using the equipment immediately after moving it from a cold environment to a warm, humid location.
- Never use sharp or pointed objects to operate the front-panel switches.
- Remove the batteries from the battery compartment if the device won't be used for an extended period.
- Only use the device if the battery cover is closed securely.
- Dispose of batteries properly in accordance with local regulations after use.

1.3 Definitions and symbols

Symbol	Description
🧍	Type BF Equipment
LOT	Batch code
REF	Reference number
UDI	Unique device identifier
🏭	Country of manufacturer
🏭	Information of manufacturer, accompanied by the name and address
MD	Indicates that the item is a Medical Device
EC REP	Authorized representative in the EU
🚫	When the end-user wishes to discard this product, it must be sent to separate collection facilities for recovery and recycling
⚠	Indicates that caution is necessary when operating the device
🚢 / 🚛	Distributor / Importer of the medical device

2. INTRODUCTION

2.1 Brief Device Description

The Pulse Oximeter, based on advanced digital technology, is designed for non-invasive spot-check measurements of functional oxygen saturation of arterial hemoglobin (SpO2). An advanced DSP algorithm reduces the influence of motion artifacts and enhances the accuracy of measurements even in cases of low perfusion.

The Oximeter can be used to measure human hemoglobin saturation and heart rate through the finger. This product is suitable for use in various settings, including homes, hospitals (including clinical use in internal medicine, surgery, anesthesia, pediatrics, intensive care, etc.), oxygen bars, social medical organizations, sports, and more.

2.2 Product Features

- Lightweight and user-friendly design.
- Manual interface direction adjustment.
- Color display for simultaneous viewing of test values and plethysmogram.
- Accurate readings even with low perfusion levels down to 0.3%.
- Visual alarm function for real-time spot checks.
- Low battery voltage indicator.
- Automatic power-off feature.
- Powered by standard two AAA 1.5V Alkaline batteries, supporting more than 20 hours of continuous operation.

3. INSTALLATION, SETUP, AND OPERATION

3.1 Description of the Front Panel

3.1.1 Parts of the Front and Back Panel

Item	Name	Description
1	Power button	Turn on the machine, direction change and parameter setting
2	Panel	Display the SpO2/PRdata and Plethysmogram

3.2 Display

After switching on the Oximeter, the display will appear as follows:

3.3 Parameter Setting

To enter the parameter setting mode, press and hold the power button for more than 0.5 seconds.

You can press the button sequentially to select the item and press the button to modify the data you need.

When the "*" sign is displayed along with the 'Alarm setup (Alm)', press the button for at least 0.5 seconds to set On/Off.

When the "*" sign is displayed along with the 'Sound setup (Beep)', press the button for more than 0.5 seconds to set On/Off.

If the "*" sign is displayed along with 'Restore', press and hold the button for more than 0.5 seconds to reset all settings to their factory defaults.

If the "*" sign is displayed along with '+/-', press and hold the button for more than 0.5 seconds to change between '+' or '-' weither you want to increase or decrease the value of SpO2 Lo, PR Hi, or PR Lo.

If the "*" sign is displayed along with 'SpO2 Lo', 'PR Hi' or 'PR Lo', press and hold the button for more than 0.5 seconds to increase/decrease the value.

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Alm          *   off
Beep              off
SpO2 Lo           94
PR   Hi          130
PR   Lo           50
Restore           on
+/-               +
       Exit
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Settings View

3.4 Operation

3.4.1 Install Batteries

Install two AAA batteries into the battery cassette with the correct polarities and cover it.

WARNING: Do not attempt to recharge normal alkaline batteries; they may leak and may cause a fire or even an explosion.

3.4.2 Turn the Pulse Oximeter On/Off

Place one of your fingers into the rubber hole of the Oximeter (it is best to insert the finger thoroughly) with the nail facing upward, then release the clamp.

CAUTION: Avoid using strong solvents, such as acetone.
CAUTION: Never use abrasives like steel wool or metal polish.
CAUTION: Do not allow liquids to enter the product or immerse any parts of the device in liquids.
CAUTION: Avoid spilling liquids onto the device while cleaning.
CAUTION: Ensure that no cleaning solution remains on the surface of the device.

Press the power button to turn on the Pulse Oximeter. The oximeter will automatically power off when no finger is detected in the device for longer than 8 seconds.

3.4.3 Read Corresponding Data from Display Screen. Please refer to 3.2 Display.

4. CLEANING

4.1 Cleaning the device

Before cleaning, switch off the power and remove the batteries.

To clean the unit, simply wipe the exterior surface, including the display screen, with a dry and soft cloth. You can use medical alcohol with a density of 75% to clean the surface. Be cautious to prevent alcohol from penetrating into the device; for this, use a dry fabric with a small amount of alcohol.

5. MAINTENANCE AND TROUBLESHOOTING

5.1 Maintenance

- Replace the batteries promptly when the battery indicator shows low power.
- Clean the surface of the Pulse Oximeter before using it for patient diagnosis.
- If the Oximeter will not be used for an extended period, remove the batteries from the battery cassette.
- It is advisable to store the product in an environment with a temperature between 10°C and 40°C and humidity ranging from 10% to 80%.
- Conduct regular inspections to ensure that there is no visible damage that could affect the safety and performance of the device.
- Ensure that there are no flammable substances, extreme temperature variations, or humidity extremes in the operating conditions.

5.2 Troubleshooting

Problems	Possible reason	Resolutions
Oxyhemoglobin or heart rate cannot be displayed correctly.	The finger is not inserted correctly.	Ensure correct finger placement. Retry if necessary.
	The patient's perfusion is too low for accurate measurement.	Seek medical attention for an accurate diagnosis if issues persist and device functionality is confirmed.
Oxyhemoglobin or heart rate is displayed unstably.	Finger may not be inserted deeply enough.	Ensure the finger is inserted deeply enough. Retry if needed.
	Finger is trembling, or the patient's body is in motion.	Advise the patient to remain still and calm during the measurement.
The Oximeter does not power on.	Insufficient or no battery power.	Ensure fresh batteries are installed.
	Incorrect battery installation.	Double-check the correct battery installation.
	Device damage.	If the issue persists, please contact our customer service for assistance.
The screen suddenly turns off.	The product automatically powers off when no signal is detected for more than 8 seconds.	The product is designed to automatically power off after 8 seconds of no signal. This is normal operation.
	The battery power is depleted.	If the issue persists due to depleted battery power, replace the batteries.

Each medical device is Quality Controlled, inspected and calibrated in accordance wthe the published specifications of Meditech Equipment Co.,Ltd. (MEDITECH GROUP).

If you encounter any issues with the product, please contact customer service for assistance.

6. FINGERTIP PULSE OXIMETER SPECIFICATIONS

6.1 Physical Characteristics

Dimensions	58 mm (L) x 32 mm (W) x 30 mm (H)
Weight	55g (including 2 AAA batteries)

6.2 Classification

Anti-electronic Shock Type	Internally powered equipment
Anti-electronic Shock Degree	Type BF equipment
EMC	Type B Class I
Mode of Operation	Continuous Operation
Enclosure Degree of Ingress Protection	IP22

6.3 Power

Internal	2x AAA 1.5V batteries
Power Consumption	Less than 30mA (Normal)

6.4 Environmental requirements

Operating Temperature	5°C - 40°C
Storage Temperature	-20°C - 55°C
Relative Humidity	15% - 80% non-condensing

6.5 Alarm default value

Parameter	Value	
Hemoglobin saturation	Bottom limit: 94	
Pulse rate	Upper limit: 130 Bottom limit: 50	

6.6 The main parameters

Parameter		Value
Hemoglobin saturation display		35-100%
Pulse rate display		30-250 BPM
Resolution	Hemoglobin saturation	1%
	Pulse rate	1 BPM
Measure Accuracy	Hemoglobin saturation	2% (70% - 100%) Unspecified (≤70%)
	Pulse rate	2 BPM