GIMA
PROFESSIONAL MEDICAL PRODUCTS

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PULSOXIMETRO CON STAMPANTE
PULSE OXIMETER WITH PRINTER
PULSOXYMETRE AVEC IMPRIMANTE
PULSOXIMETRO CON IMPRESORA

MANUALE D'USO E MANUTENZIONE
USE AND MAINTENANCE BOOK
INSTRUCTIONS DE FONCIONNEMENT ET ENTRETIEN
MANUAL DE USO Y MANTENIMIENTO

ATTENZIONE: *Gli operatori devono leggere e capire completamente questo manuale prima di utilizzare il prodotto.*
ATTENTION: *The operators must carefully read and completely understand the present manual before using the product.*
AVIS: *Les opérateurs doivent lire et bien comprendre ce manuel avant d'utiliser le produit.*
ATENCIÓN: *Los operadores tienen que leer y entender completamente este manual antes de utilizar el producto.*

Fabbricante
Manufacturer
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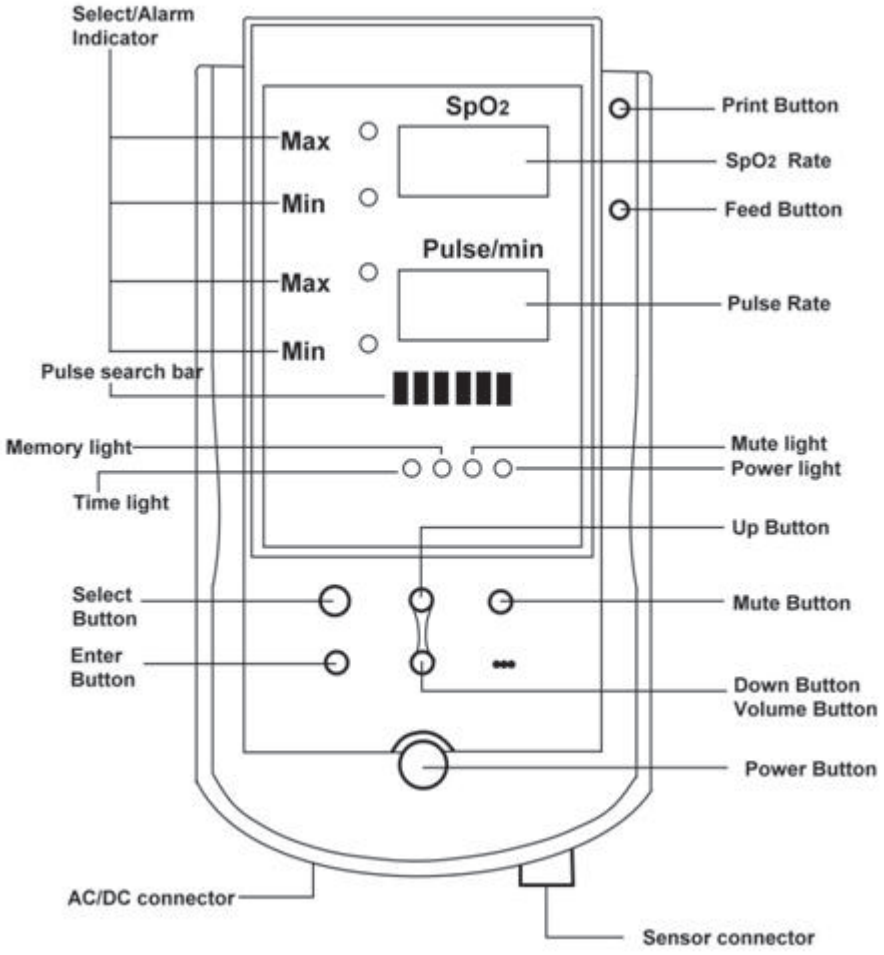
Select/Alarm Indicator
SpO2
Max
Min
Max
Min
Pulse/min
Print Button
SpO2 Rate
Feed Button
Pulse Rate
Pulse search bar
Memory light
Time light
Mute light
Power light
Up Button
Select Button
Enter Button
Mute Button
Down Button
Volume Button
Power Button
AC/DC connector
Sensor connector

FEATURES

Product description

Portable pulse oximeter (cod. 34291) is an instrument with high accuracy and reliable performance. This hand-held unit is easy to operate with the functions of memory recalls, printing, tones, 8 levels volumes, and alarms presetting for oxygen saturation and pulse rate

The product presents the following features:
- high accuracy
- quick assessment of Oxygen saturation and Pulse Rate
- SpO_2 and Pulse Rate display
- clear numerical LED display
- adjustable SpO_2 and Pulse alarm settings
- compact, light weight and easy to operate
- reliable quality and excellent sales service
- batteries or AC/DC adapter selectable
- with memory recall function
- low power consumptions with auto switch-off function
- build-in thermo printer
- silence control and 8 levels volume adjustable

Specifications

Oxigen Saturation Range: 0% to 100%
Pulse Rate Range: 30 bpm to 250 bpm
Display:
Oxygen saturation, Pulse Rate, Pot, Prb, Pulse search indicator & Low battery indicator
SpO_2 Accuracy: ±2% between 100% to80%
±3% between 79% to 65%
below 65%, not specified
Pulse Accuracy: ±1% of full scale
Default Alarm Settings:
- SpO_2 Upper Limit:: 100%
- SpO_2 Lower Limit : 50%
- Pulse Rate Upper Limit: 250 bpm
- Pulse Rate Lower Limit: 30 bpm

Memory: Memory recalls up to 40 to 50 records, depends on individual's bpm
Sound: Volume adjustable / Silence control
Printer: Time and the figures of SpO_2 and Pulse Rate
Power Requirements:
- DC 6 Volts by 4 pieces AA size batteries
- AC AC adapter output DC 6 V, 600 mA
- rechargeables AA batteries (optional)

Operating Temperature: -5ºC to 55ºC
SpO_2 Sensors: Finger clip sensor & wrap probe (optional)
Dimensions: 168 mm x 88 mm x 50 mm
Weight: 330g (without batteries)

Field of application

This is a pulse oximeter: reliable, portable and affordable. It is designed to the fields of hospitals, clinical surgery and home care applications.

PRESCRIPTIONS

Accident prevention

The product shall be used by qualified personnel only.

Do not use the equipment in case it is damaged. Apply to your retailer.
Avoid precarious repairs. Repairs shall be carried out with original spare parts only, which shall be installed according to the intended use.

Since the product is made of corrosion-proof materials suitable for the enviromental conditions foreseen for its normal use, does not require special care, however it is necessary to store it in a closed place making sure that is protected from dust and dirt to assure its hygenic conditions. Moreover, it is recommended to store the product in a place which can be reached easily by the personnel in case of necessity.

TRANSPORT

Transport procedures

It is not necessary to follow particular transport procedures. It is however recommended to carefully handle it and avoid shocks. The equipment is delivered in an imitation leather case allowing a comfortable shoulder transport.

Unpacking

Always remember that packing elements (paper, cellophane, stitches, adhesive tape, etc.) can cut and/or hurt if they are not carefully handled.
They shall be removed with adequate means and shall not be left at the mercy of irresponsible persons; the same is valid for tools used to remove packages (scissors, knives, etc.).

After opening the packages, first of all it is necessary to check all pieces and parts composing the product. Check that they are all present and in perfect conditions.

INSTALLATION

Installation and connections

The pulse oximeter is delivered with the following components: a practical imitation leather case, 4 “AA” alkaline batteries, AC adapter with 6 V output, 600 mmA, a finger sensor for heart beat survey.
To feed the equipment with 4 “AA” batteries, open the apposite compartment on the back and insert the batteries. Pay attention not to invert the direction of poles (see the picture inside the battery compartment) and then replace the cover.
To feed the equipment with an AC adapter, insert the adapter jack into the corresponding socket on the equipment base and plug in the adapter.

With the exception of rechargeable batteries, remove common or alkaline batteries when using the AC adapter for charging.

Insert the finger sensor connector into the pulse oximeter (when the sensor is not inserted, the display views the following writing: **Prb**). It is sufficient to make the grooves present on the connector and on the socket match.

How to install paper roll

1) Press the power button to turn on the appliance
2) Use finger to pull out the paper cover
3) Unroll the paper roll, make sure the paper is flat and smooth
4) Firmly insert the paper roll toward the inside of the gap
5) In the mean time, press FEED button to make sure the paper roll over outside of the cover in the right position
6) Then close up the paper cover

OPERATION

Functions description

Mute on/off

There is a acoustic signal when SpO2 and Pulse Rate are detected. You may press the MUTE button to keep the silence, and the MUTE light will be on.

Volume

Press VOLUME button to choose the different sound level

Feed

Press FEED button only when the battery power is in good condition to skip one line of the paper

Print

press PRINT button only when the battery power is in good condition to print out the last 6 data stored in the memory

Battery Box

locates at the back of the appliance which can store 4 pieces AA batteries

AC Adapter Connector

locates at the left bottom side of the appliance where the AC adapter can be connected

Sensor Connector

locates at the right bottom side of the appliance where the connector of the sensor should be plugged in. To remove the sensor, pull out the sensor from the appliance.

- New alarm setting will be saved automatically. When running out of batteries or being disconnected with power, the alarm setting will return to default alarm settings.
- When the detected values are beyond or below the set figures, the alarm will be on.
- Print & Feed button can be used only on the condition of full scale or pulse search bar.

Signal Display

: Pulse Search Bar, indicating the strength of the pulse and patient signal. If it is in correct detecting condition, the search bar should have 4 scales running bar at least.

Prb: Sensor disconnected with the appliance
Pot: Patient disconnected with the appliance
Lo: Weak signal from patient
SpO2 Max/Min: alarm values of SpO2
Pulse Max/Min: alarm values of Pulse.
Indicative Lights:
- TIME light on, it indicates the time setting is in function
- MEMORY light on, it indicates the memory function is on
- MUTE light on, it indicates the oximeter is working in silence.
- POWER & LOW BATTERY light, if the light in RED, it indicates the power is on. When the light turn GREEN, it indicates the power of battery is low. When the GREEN light on, it could still work for half to one hour. Also it is the time to consider replacing new batteries.

Operating instructions
1) To turn the equipment on, press the green ON/OFF pushbutton. To confirm power-up, an acoustic signal is released and **PWR** pilot light turned on. The display views the following writing: **Pot** (no patient connected).
2) Insert the finger of the patient into the examination sensor. It is possible to use any finger, however it is advisable to select the finger suitable to the sensor dimensions. (The PULSE OXIMETER can be fitted with different sensors, follow the instructions).

In order to perform an accurate detection of the value, the patient shall keep still.

3) Wait 6 seconds and the sensor starts up measuring. The upper display shows the value of blood oxygen saturation rate (SpO 2 %) and the lower display shows the heart rate (Pulse/min).
PULSE OXIMETER is provided with a sound signal warning that the values detected by the sensor are higher or lower than the ones stored in the equipment.

Default alarm settings are:

SpO 2	Max	100%
SpO 2	Min	50%
Heart rate	Max	250 bpm
Heart rate	Min	30 bpm

To change these values, proceed as follow:

• SpO 2 alarm max. value
Press **Select** once, the red led (SpO 2 Min) lights up and a value blinks on the upper display. This value represents the **maximum** value for oxygen saturation (SpO 2).
To change this value, press key ∧ to increase it and key ∨ to reduce it.

• SpO 2 alarm min. value
Press **Select** two times, the red led (SpO 2 Min) lights up and a value blinks on the upper display. This value represents the **minimum** value for oxygen saturation (SpO 2).
To change this value, press key ∧ to increase it and key ∨ to reduce it.

• Heart rate alarm max. value
Press **Selec**t three times, the red led (Pulse Max) lights up and a value blinks on the lower display. This value represents the **maximum** value for heart rate (Pulse/min). To change this value, press key ∧ to increase it and key ∨ to reduce it.

• Heart rate alarm min. value
Press **Selec**t four times, the red led (Pulse Max) lights up and a value blinks on the lower display. This value represents the **minimum** value for heart rate (Pulse/min). To change this value, press key ∧ to increase it and key ∨ to reduce it.

Press the **Enter** to confirm the setting.

When the batteries run down or when the equipment is disconnected from power supply, the original alarm settings are restored.
During measurement, the pulse oximeter display shows an intermittent scale of 10 leds indicating the search for beating. As seconds go by, the scale grows longer and becomes stable. When the signal is good, the search bar should show at least 4 leds.
If the loud speaker is on, the equipment gives out intermittent audio signals. Press **Mute** pushbutton to stop the sound and the red led on the display lights up. Press the pushbutton again and the sound starts up again.
The alarm keeps on sounding for a minute and then it stops.

• Time presetting
Set up current time
- Press **SELECT** button to see the time light on, and upper display “tin” and low display “no” flashing.
- Press UP ∧ or DOWN ∨ button to select lower display “yes” flashing.
- Press **Enter** button to confirm as you want to presetting the date and time.
- Presetting the year in the first, press UP ∧ or DOWN ∨ button to select the year currently.
- After presetting the year, press the **Select** button and upper will display “non” to select the month
- Press the UP ∧ or DOWN ∨ button to select the month currently.
- After presetting the month, press the **Select** button and upper will display “day” to select the day.
- Press the UP ∧ or DOWN ∨ button to select the day currently.
- After presetting the day, press the **Select** button to presetting the Hour, Minute and Second.
- Press the **Enter** to confirm all of time setting.

CAUTION: AFTER PRESETTING OF SpO2, PULSE RATE AND TIME, YOU MAY START TO DO THE FOLLOWING FUNCTIONS.

• Memory recall function

Memory recall function is ONLY to be used when the appliance has been continuous detecting for 2~3 minutes.

- Press **SELECT** button until the upper figure display SHO with lower flashing NO
- Press UP ∧ button to choose between flashing YES or NO figure
- Then Press Enter button to confirm.
- It will show the data of memory from record #1 with SpO2 in upper figure and Pulse Rate in lower figure
- Press the DOWN ∨ button to increase the record number.
- Press the **Enter** button to stop the memory recall function and go back to stand by for measuring

• Time resetting
Please use the setting when the time is incorrect.
- press SELECT button UNTIL the upper figure display SHO with lower flashing NO
- by press UP ∧ button to choose between flashing YES or NO figure
- then press DOWN ∨ button as ENTER button to choose NO for time setting
- keep pressing UP ∧ button to set up current HOURS
- press SELECT button to see the lower flashing number
- keep pressing UP ∧ button to set up current MINUTES
- press DOWN ∨ button as ENTER button to confirm the setting
- then press SELECT button to go back to operation status

Switching off
After the measurement has been taken, turn the equipment off by means of ON/OFF pushbutton. A beep is given out and then the equipment stops.

MAINTENANCE
The product has been conceived to last forever; it is resistant to most part of chemicals except for methyl ethyl ketones (M.E.K.), diluents and nail polish removers.

To clean the instrument, make use of a cloth dampened with disinfectant.

Disposal: *The product must not be disposed of along with other domestic waste. The users must dispose of this equipment by bringing it to a specific recycling point for electric and electronic equipment.*
For further information on recycling points contact the local authorities, the local recycling center or the shop where the product was purchased. If the equipment is not disposed of correctly, fines or penalties may be applied in accordance with the national legislation and regulations.

GIMA WARRANTY CONDITIONS

Congratulations for purchasing a GIMA product.
This product meets high qualitative standards both as regards the material and the production. The warranty is valid for 12 months from the date of supply of GIMA.
During the period of validity of the warranty, GIMA will repair and/or replace free of charge all the defected parts due to production reasons. Labor costs and personnel traveling expenses and packaging not included.
All components subject to wear are not included in the warranty.
The repair or replacement performed during the warranty period shall not extend the warranty.
The warranty is void in the following cases: repairs performed by unauthorized personnel or with non-original spare parts, defects caused by negligence or incorrect use.
GIMA cannot be held responsible for malfunctioning on electronic devices or software due to outside agents such as: voltage changes, electro-magnetic fields, radio interferences, etc.
The warranty is void if the above regulations are not observed and if the serial code (if available) has been removed, cancelled or changed.
The defected products must be returned only to the dealer the product was purchased from. Products sent to GIMA will be rejected.