

## Advanced Blood Pressure and SpO2

# User Manual



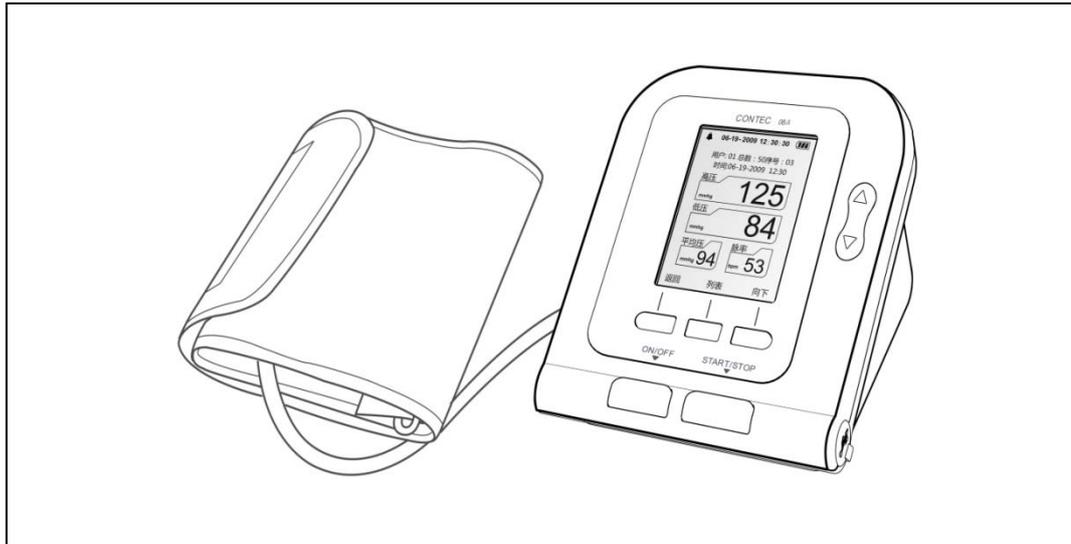
# Contec 08A

SOUTHEASTERN MEDICAL SUPPLY, INC

# User Manual

## Blood Pressure Monitor

Model CONTEC08A



- To assure the correct use of the product safety measures, please carefully read user manual before using.
- After reading, please validly keeping to refer and consult at any moment.

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## Safety Precautions:

- Before use, carefully read "Safety Precautions" for a correct use.
- To prevent users suffered hurt or damnification due to improper use, see "Safety Precautions", and use this product properly.

For safety reasons, be sure to comply with safety precautions.

 **Note** 

If not to use correctly, it exists that a potentially hazardous situation which may result in injury to the user or patient or damage to the equipment or other property.

 **Note** 

Self-diagnosis and treatment using measured results may be dangerous.

Follow the instructions of your physician.

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Contact your physician for specific information about your blood pressure.

Please hand measurement results to the doctor who know your health to accept diagnosis.

For severe blood circulation disorder or arrhythmia patients, please use the device under the guidance of a doctor.

Otherwise it may lead to acute hemorrhage, or measurement error as a result of squeezed arm.

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This device is intended for use in measuring blood pressure and pulse rate.

Do not use for any other purpose.

Otherwise it may cause accident or holdback.

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Please use special cuff.

Otherwise it is possible that measurement result is incorrect.

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Do not disassemble or attempt to repair the unit or components without permission.

Otherwise it can not measure correctly.

#### Operation for AC Adapter (Separate Sale)

 **Note** 

Please use sold separately dedicated AC adapter.

Otherwise it may cause trouble.

Sold separately dedicated AC adapter be sure to use the AC 220V. Be sure to use a separate socket.

Otherwise it may cause electric shock or injury.

When there is breakage of sold separately dedicated AC adapter plug or wire ,  
please immediately pulled the plug from the socket.

Otherwise it may cause electric shock or injury.

Do not plug or unplug the adapter power cord with wet hands.

Otherwise it may cause electric shock or injury.

#### Operation for battery

 **Note** 

Please use 4 "AA" size manganese or alkaline batteries, do not use batteries of other types.

Otherwise it may cause fire.

New and old batteries, different kinds batteries can not be confusion.

Otherwise it may cause battery leakage, heat, rupture, and damage to blood pressure.

+ and - polarities of the batteries must match the polarities of the battery compartment as indicated.

When the batteries power exhausts, replace with four new batteries at the same time.

Please take out the batteries when you do not use the device for a long time(more than 3 months).

Otherwise it may cause battery leakage, heat, rupture, and damage to blood pressure.

If battery fluid should get in your eyes, immediately rinse with plenty of clean water.

Contact a physician immediately.

Otherwise it will cause blindness or other hazards.

If electrolyte of the batteries immodestly glues on the skin or the clothes,  
immediately rinse with plenty of clean water.

Otherwise it may hurt the skin.

 **Advice** 

Do not subject the monitor to strong shocks, such as dropping the unit on the floor.

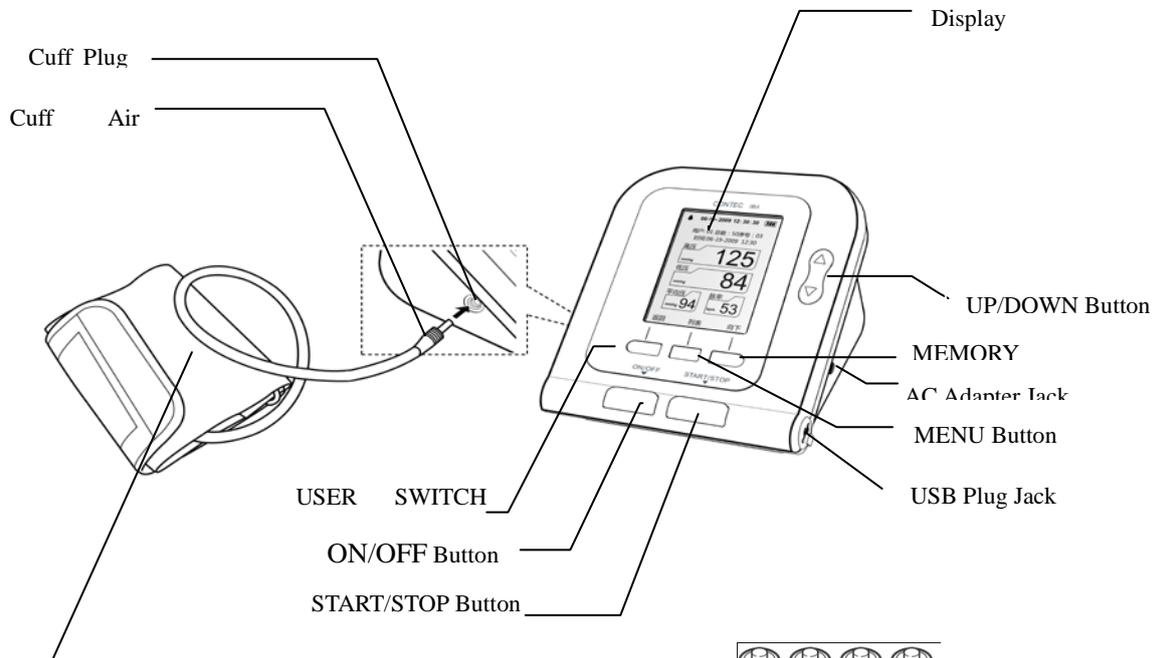
Do not inflate before the cuff wraps around the arm

Do not inflect the cuff and the air tube forcibly

This device is intended for using in measuring blood pressure and pulse rate in the adult、 pediatric and neonatal population.

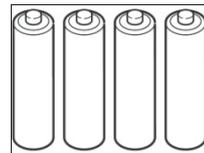
# Main Unit

The production is in the package . Open the package and confirm whether the production is whole.



## Adult Cuff

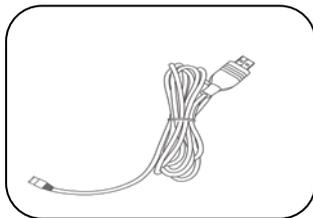
## Dry Battery



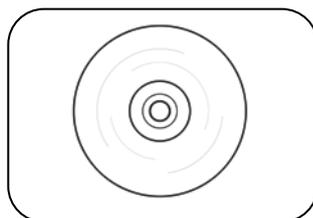
## Accessories:

(Specification: limb circumference 22-32cm (middle part of upper arm), please choose suited cuff when measuring pediatric or other.)

USB Data Line



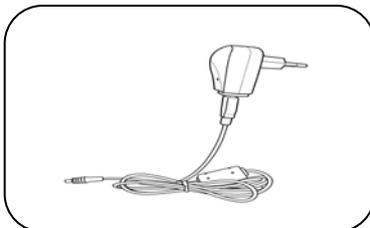
Software CD



User Manual



Separate Sale:



AC Adapter CMS0106  
 Input AC 100-240V 50/60Hz AC 150mA  
 Output DC 60V±0.2V 1.0A



Spo2 Probe Spo2-10UC15  
 Spo2 Measurement Range 35%~ 100 %  
 Measurement Accuracy 70% ~ 100% □ 2 %  
 Pulse Measurement Range 30 ~ 250bpm

## Button Functions

All the operations to the Electronic Blood Pressure Monitor are through the buttons. The names of the buttons are above them. They are:

 **【ON/OFF】** Hold the button to start or close the device.

 **【START/STOP】** Press to inflate the cuff and start a blood pressure measurement. When measuring, press to cancel the measurement and deflate the cuff.

 The three buttons correspond with the hint in the LCD screen downside, pressing any button will carry on corresponding function, eg: **【MENU】【ENTER】【LIST】** etc.

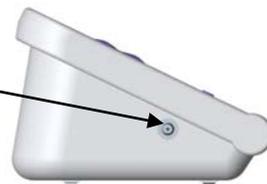
 Up and down buttons respectively carry on the functions of moving the cursor up and down, changing the parameters and switching the status.

## External Interfaces

### ⚠ Note ⚠

Please hold the air plug to remove the NIBP cuff.

①Cuff Socket



left side

The right side of the instrument is USB socket and AC adapter socket.

①USB socket

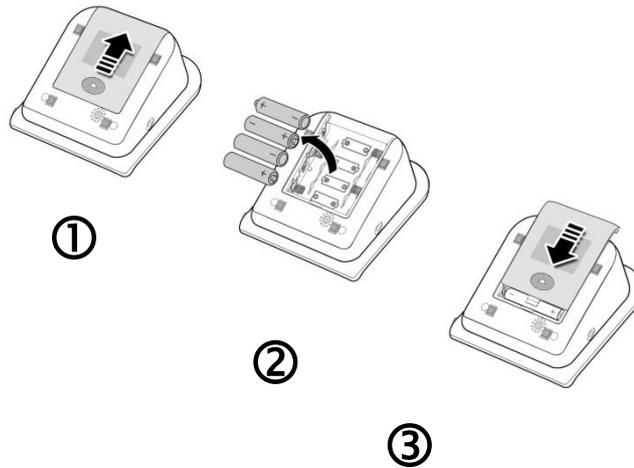
②AC adapter socket



right side

## Dry Battery/AC Adapter Installation

The production can use dry battery or AC adapter as power source.



### Dry Battery Installation

- ① Press the ▲ indicator on the battery cover and slide the cover off in the direction of the arrow.
- ② Install 4 "AA" size dry batteries so the +(positive) and -(negative) polarities match the polarities of the battery compartment as indicated.
- ③ Replace the battery cover.

Icon “”:the batteries power will exhaust.

Replace with four new batteries(the same sort) at the same time.

Turn the unit off before replacing the batteries.

 **Note** 

**Dispose of the batteries according to applicable local regulations about environmental.**

### Using The AC Adapter

- ① Connect Monitor and the AC Adapter. Insert the AC Adapter Plug into the AC Adapter Jack on the right side of the monitor.
- ② Plug the AC Adapter into a 220V AC outlet.

 **Note** 

**①Hold and pull the Housing to remove the AC Adapter from the electrical outlet. Do not remove by pulling on the cord.**

**② Remove the AC Adapter plug from the monitor.**

**Please be sure to use dedicated AC adapter (Model:CMS0106).**

 **Note** 

**When adapter and dry battery are both used at the same time ,the battery power will not be consumed. Switch adapter and battery as power supply when the device is off, otherwise the device may shutdown due to power failure.**

## Setting The Date And Time

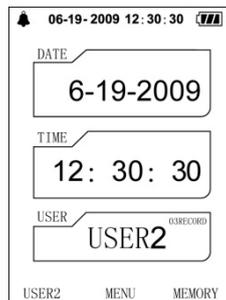
- It is necessary to set date and time after turning on the device .
- The Blood Pressure Monitor automatically stores measurement results with date and time.
- If dry battery power exhausts or removed ,then, after the device turned on,the date resumes from the last setting value and the time from 00:00:00,set the date and time again.

The Blood Pressure monitor stores the measure results of three users automatically, and up to 100 items for every user. The results can be uploaded to PC via USB and processed with the PC software. If the date and time are set correctly, the date and time when measuring will be correct in the memory ,otherwise it may not be correct.

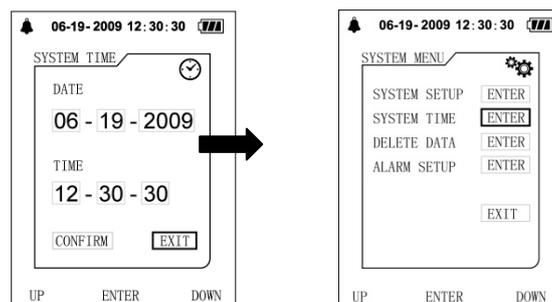
⚠ **Note** ⚠

### Correctly use data upload function:

1. Turn on the device to enter the main interface shown as the follow:



2. Press **【MENU】** button to enter **【SYSTEM MENU】** and select **【SYSTEM TIME】** item in system menu. The current time will be displayed:



3. Press **【UP】** or **【DOWN】** buttons to set date and time.

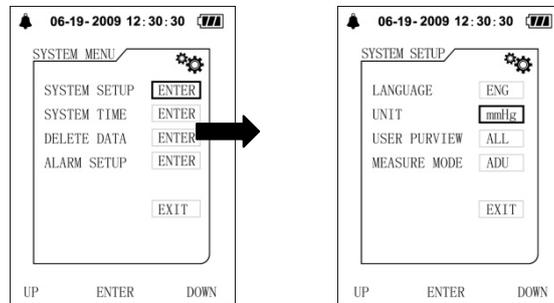
4. After setting, select **【CONFIRM】** item and press **【ENTER】** button to confirm the setting value. If you do not want to change the time, select **【EXIT】** item and press **【ENTER】** button to return the previous menu.

## Unit

There are two units: "mmHg" and "kPa".

The default is: "mmHg".

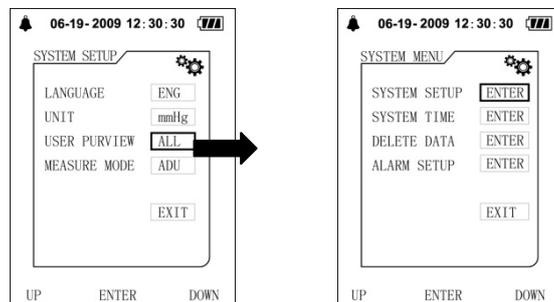
To switch "mmHg" and "kPa" units, enter the **【SYSTEM SETUP】** submenu in **【SYSTEM MENU】**, and complete switching in **【UNIT】** item.



## User Switch

The Blood Pressure monitor stores the measure results of three users automatically, and up to 100 items for every user.

Users can press **【USER】** button in main interface to switch user. Or press **【USER PURVIEW】** item in **【SYSTEM SETUP】** menu to switch user.



### ⚠ Note ⚠

When the **【USER PURVIEW】** is set to be **【ALL】**, current user can be switched under main interface; when set to a certain user, it will not be able to switch.

## Applying the Arm Cuff

The measurement can be carried out by applying the cuff on left or right arm.

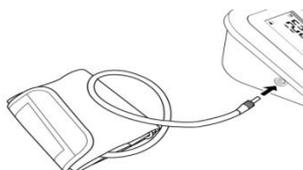
Remove tight-fitting clothing from your upper arms.

Carry out the operation in a room with comfortable temperature.

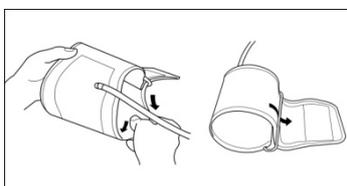
When measuring, take the thick clothes off instead of rolling up the sleeves.

In order to measure accurately, pay attention to applying the cuff properly (left arm).

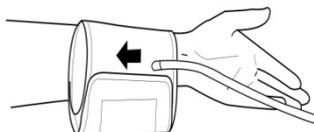
- ① Make sure the air plug is securely inserted in the main unit.



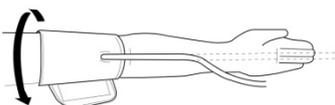
- ② Stretch cuff into a barrel for the arm can conformable enter into the barrel.



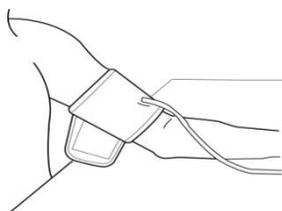
- ③ Arm penetrate through the cuff, the air tube of the cuff will pass the top of your palm.



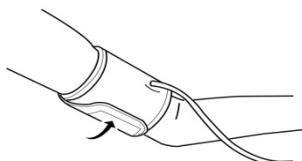
- ④ Apply the cuff to your upper arm. The color marker is on the inside center of your arm and make the air tube aligned with your middle finger.



- ⑤ The bottom of the cuff should be approximately 2cm~3cm above your elbow.



- ⑥ Be fixed with cloths, and wrapped tight cuff, the arm and the cuff should not have gaps.

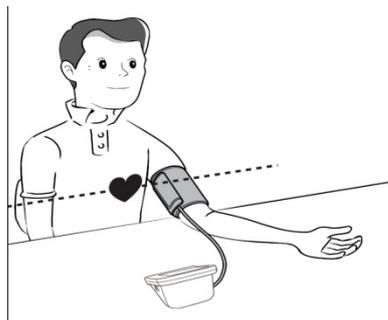


## BP Measurement

### Accurate Measurement Way

Measurement in quiet and relaxing state.

1. Place your arm on a table.
2. The cuff is level with your heart.
3. The palm of the hand is up, and the body relax.



**Try to measure your blood pressure at the same time each day with the same arm and the same pose for consistency.**

The high and low location of cuff will cause changes in measurement results.

Do not touch BP monitor, cuff and windpipe during measurement.

**Measurements should be taken in a quiet place and the body is in relaxing state.**

Remain still 4~5 minutes before measurement.

Relax the body, do not let the muscle activity.

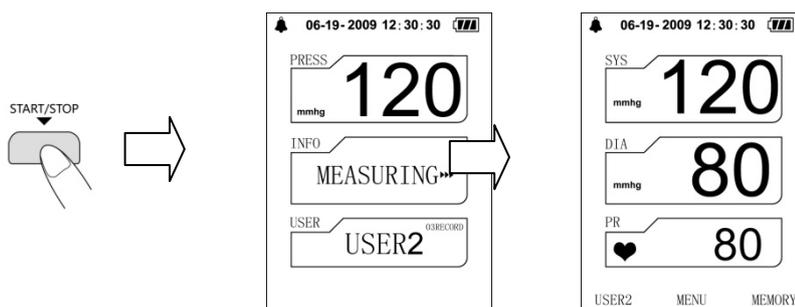
Do not talk and movement during the measurement.

Wait 4~5 minutes between measurements

Do not use a cellular phone near the device

## BP Measurement

① Press **【START/STOP】** button to take a measurement.



Start measurement

measurement result

During measurement, please keep correct pose and quiet state, do not move.

### Stop Measurement

During measurement, if you wish to stop measuring, press **【START/STOP】** button to stop and deflate.

② Confirm Measurement Value

Measurement value can be automatically stored. ([using memory function] refer to 10 page)

\*Self-diagnosis and treatment using measured results may be dangerous. Follow the instructions of your physician.



■ **Wait 4-5 minutes between measurements.**

When repeated measurements, because the arm appears congestion, it may not get correct blood pressure measurement. After the blood flow, take a measurement once again.

- When some factors affect the measurement results in measurement process, error messages hints will appear on the screen, you can obviate the malfunction and restart a measurement.

③ In no physiological alarm state, press any button to carry on the corresponding button function; in audio alarm state, press any button (except **【ON/OFF】** button) to clear up the audio alarm.

④ Take off the cuff, hold **【ON/OFF】** button to turn the monitor off.

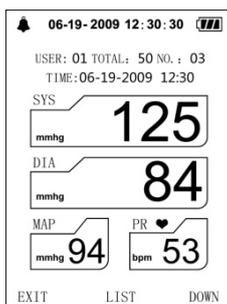
\*The monitor will automatically turn off after two minutes in which there is no operation to the device, even if you forget to turn the power off.

## Memory Function

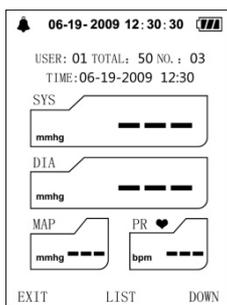
The monitor is designed to store and display the blood pressure, pulse rate values and the date and time when measured, which are up to 100 items. If there have been 100 items stored, when the 101 measurement have been taken, the earliest results are deleted.

## Review The Memory Value

1. In the main interface (interface when boot-strap), press **【MEMORY】** button to review the most recent measurement values in large-print with the serial number from 1 to 100.

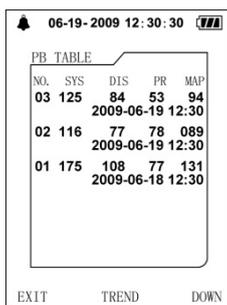


2. Press **【UP】** / **【DOWN】** button to circularly switch the former measurement values.

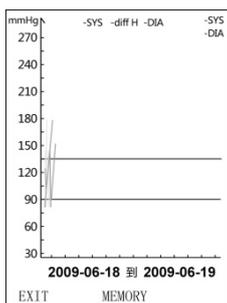


\*The right figure shows that there is no Measurement results.

3. Press **【LIST】** button to switch to data table interface.



4. Press **【TREND】** button to display trend interface.



5. Finish displaying the measurement values

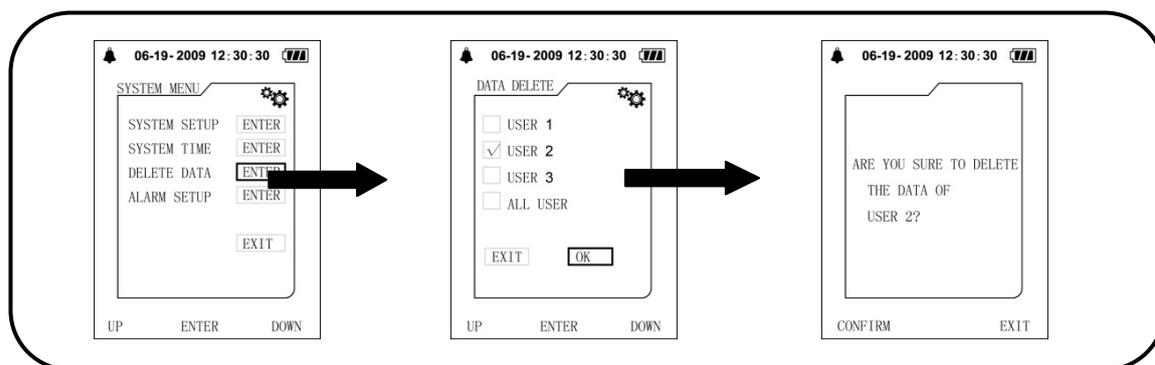
Press **【EXIT】** to return the main interface or hold **【ON/OFF】** button to turn the power off.

\*The monitor will automatically turn off after two minutes in which there is no operation to the device, even if you forget to turn the power off.

## Delete Memory Values

Users can delete all values stored in the memory of each user separately instead of deleting a special item.

1. Press **【MENU】** button to enter **【SYSTEM MENU】**, select **【DELETE DATA】** item and enter its interface, in which select the user whose data will be deleted. All measurement results of selected user will be deleted after confirm



2. Finish Operation

Select **【CONFIRM】** or **【EXIT】** to return the previous menu, or hold **【ON/OFF】** button to turn the power off.

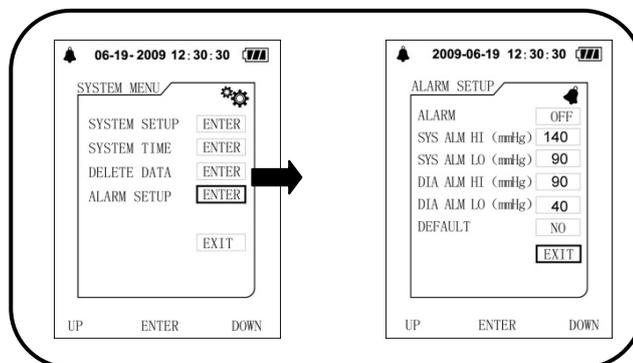
\*The monitor will automatically turn off after two minutes in which there is no operation to the device, even if you forget to turn the power off.

## Alarm Function

Alarms are classified into two categories: technical alarm and physiological alarm.

### Physiological Alarm

User can press **【MENU】** button to enter system menu, select **【ALARM SETUP】** item to enter its interface, and then set alarm on-off and the high and low alarm limits, when blood pressure is higher than the high limit or lower than the low limit, the physiological alarm will occur.



Press any button to cancel the alarm in physiological alarm state and this method brings no affection to the next alarm. To close alarm in **【ALARM SETUP】** will disable the alarm function until switch alarm on.

### Technical Alarm

When power is about to exhaust and alarm is on, then the alarm will occur. This alarm can not be cancelled unless being closed or the power replaced.

## SPO2 Measurement Function(Optional)

Please pay attention to:

### ⚠ Warning ⚠

- Ⓞ Pulse oximeter can overestimate the SPO2 value in the presence of Hb-CO, Met-Hb or dye dilution chemicals.
- Ⓞ ES (Electrosurgery) equipment wire and SpO2 cable must not be tangled up.
- Ⓞ Do not put the sensor on extremities with arterial catheter or venous syringe.
- Ⓞ Do not perform SPO2 measuring and NIBP measuring on the same arm at one time, because obstruction of blood flow during NIBP measuring may adversely affect the reading of SPO2 value.

### ⚠ Note ⚠

- Ⓞ Make sure the nail covers the light window.
- Ⓞ the wire should be on the backside of the hand.
- Ⓞ SPO2 value is always displayed in the fixed place.

## ⚠ Warning ⚠

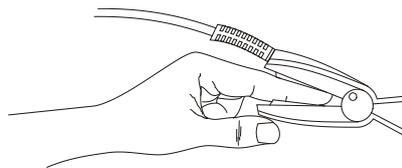
⊙ Check if the sensor cable is in normal condition before monitoring. After unplugging the SpO2 probe cable from the socket, the interface will return.

⊙ Do not use the SpO2 probe once the package or the sensor is found damaged. Instead, you shall return it to the vendor.

⊙ Prolonged and continuous monitoring may increase jeopardy of unexpected change of dermal condition such as abnormal sensitivity, erubescence, vesicle, repressive putrescence, Particularly in newborns or in a Perfusion disorders and changes or immature skin form of the patient. According to skin quality change, correct optical path alignment and attachment methods to regularly check the place of SPO2 probe, and change the attachment position when the quality of skin decline. More frequent examinations may be required for different patients.

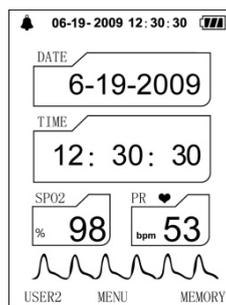
## Monitoring Procedure

1. Attach the sensor to the appropriate site of the patient finger as following figure.



place SPO2

2. Plug the connector of the SPO2 probe cable into the USB socket in the lower right of the monitor. The main interface will switch to SPO2 interface. This operation brings no affection to other functions.



### Measurement Limitations

**During operation, the accuracy of oximeter readings can be affected by:**

- High-frequency electrical noise, including noise created by the host system, or noise from external sources, such as electrosurgical apparatus connected to the system.
- Intravascular dye injections.
- Excessive patient movement.
- External light radiation.
- Improper sensor installation or incorrect contact position of the patient.
- SPO2 probe temperature (optimal temperature between 28°C and 40°C).
- Placement of the SPO2 probe on an extremity that has a blood pressure cuff, arterial catheter, or intravascular line.

- Significant concentrations of dysfunctional hemoglobin, such as carboxyhemoglobin and methemoglobin.
- SpO2 too low.
- Bad circular injection of the part being measured.
- It is required to use SPO2 probe which is provided by our company, contact with our sale department when changes SPO2 probe.

## Maintenance and Cleaning

### **Warning**

**Take cuff off the power source before cleaning the monitor or the SPO2 probe.**

### **Caution**

- Do not subject the sensor to autoclaving.
- Do not immerse the SPO2 probe into any liquid.
- Do not use any SPO2 probe or cable that may be damaged or deteriorated.

#### **Cleaning:**

- Use a cotton ball or a soft mull moistened with hospital-grade ethanol to wipe the surface of the SPO2 probe, and then dry it with a cloth. This cleaning method can also be applied to the luminotron and receiving unit.
- The cable can be cleaned with 3% hydrogen dioxide, 70% isopropanol, or other active reagent. However, connector of the SPO2 probe shall not be subjected to such solution.

# **Installation Of The Software**

## **Computer requirements**

Pentium IV 1.8G or more

Operation System: Windows XP Pro or newer

EMS memory: 256M or more

Hard Disk: 40G or more

Display: 17 inch or more

CD-ROM

USB: 2.0 or newer

Resolution of printer: 600 DPI

## **Installation Of Software**

1. Place the CD-ROM in the CD-ROM compartment located on your computer.
2. If Auto Play for CDs is enabled, place CD in reader and follow instructions when they appear in the screen; otherwise follow install instructions below:
  1. Open Windows Explorer.
  2. Click on the root CD-ROM directory.
  3. Double click file Contec08A\_Setup.EXE.
  4. Follow the instructions in the screen.

Refer to "Software Help" for details about the operation method of the PC software.

## Error Message

Error message will be displayed in the screen if there is something wrong when measuring. The causes and solutions are shown as follows:

Error Message	Causes	Solutions
Self-test failure System failure	Function abnormal	Please contact us
Loose cuff	Cuff is not connected correctly.	Correctly connect cuff (refer to 8 page)
Air leakage	Cuff plug fall off	Make sure the cuff plug is securely inserted in the windpipe (refer to 8 page)
Air pressure error	Air pressure error	Keep arm, body still, measure again
Weak signal	The pulse signal is too weak or the cuff is loose.	Correctly connect cuff (refer to 8 page)
overpressure	Cuff is blocked or squeezed	Correctly connect cuff (refer to 8 page)
Excessive movement Over range Saturated signal	The signal extent is too big owing to the arm or body moving or other reasons when measuring	Keep arm, body still, measure again
Time out	It takes too much time	

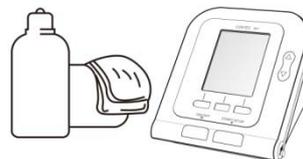
## TROUBLESHOOTING

Abnormal Phenomenons	Causes	Solutions
BP measurement values too high or too low.	Cuff is not connected correctly.	Correctly connect cuff (refer to 8 page)
	Talk or move arms when measuring	Keep quiet and restart a measurement
	The turnup clothing presses the arm	Take off the clothing which presses the arm, and restart a measurement
No pressure	Cuff leakage	Buy a new cuff
	The cuff windpipe is not correctly connected with cuff	Correctly connect
Cuff deflates in short time	Loose cuff	Correctly apply cuff
It can not carry on measurement when press the measurement button		Switch on the power once again and restart a measurement
Power off suddenly when inflating	No use for a long time, the power of batteries can be exhausted owing to the changed temperature	Replace all four batteries with new ones.
Hold the on/off button but can not start the device	Power of batteries can be exhausted	Replace all four batteries with new ones.
	The battery polarities is reversed	Check the battery installation for proper placement of the battery polarities.
Other phenomenon		Switch on the power once again and restart an operation. Replace the batteries. If no, please contact us.

## Clean And Maintenance

\*Please follow the instructions in the user manual. If you do not comply, our company will not assume responsibilities of the quality.

- Frequently clean the Blood Pressure monitor.
- If there is something dirty on the device, clean it with a soft dry cloth.
- If the unit is particularly dirty, you can clean it with a soft cloth dampened with water or neutral detergent after the cloth can be full twisted.



### **Warning**

**Do not submerge the device in water.**

### **Advice**

- Do not use any naphtha, thinner or gas to clean.
- Do not attempt to clean or wash the cuff.



## Keeping

### **Advice**

**Do not place the machine in the following areas:**

- Easy to splash water areas.
- Direct sunlight, extreme hot, humidity, dust, causticity gas areas.
- Lean or the area which can cause vibration, impact.
- Chemicals or corrosive gas storage areas.
- Remove the batteries if the unit will not be used for long time (more three months).



## Specification

Name	Blood Pressure Monitor
Model	CONTEC08A
Harmful liquid proof degree	Ordinary equipment (sealed equipment without liquid proof)
Display	2.8" color LCD Display
<b>NIBP Specifications</b>	
Measurement Method	Oscillometric method
Working modes	Manual, Automatic
Measurement Range	Pressure: 0~290mmHg (0~36.0kPa) Pulse: 40~240/min
<b>Resolution</b>	
Pressure	1mmHg
<b>Measurement Accuracy</b>	
Cuff Pressure Accuracy	±3mmHg
Error	The BP Value of the device is equivalence with the measurement value of Stethoscopy . The error meets all the conditions in the YY0667-2008.
Operating Temperature/ Humidity	+5°C~40 °C . 15%RH~80%RH
Transport and Storage Temperature/Humidity	-20°C~+55°C . ≤95%RH
Atmospheric pressure	80kPa~105kPa
<b>Battery</b>	4 "AA" alkaline batteries, AC Adapter (AC 220V) separately sold
Main Unit Dimensions	130*110*80mm
Main Unit Weight	300gram
Anti-electroshock type	II class BF digital device

<b>Accessories</b>	<p>Normal Configure:  Adult Cuff: limb circumference 22-32cm (middle of upper arm )  Soft CD, User Manual, USB data line, four "AA" alkaline batteries</p> <p>Separate Sale:  DC Adapter: CMS0106  Input: AC 100-240V 50/60Hz AC 150mA  Output: DC 6.0V±0.2V 1.0A  Manufacturer:Qinhuangdao CONTEC MEDICAL SYSTEMS CO., LTD</p> <p>Spo2 Probe: Spo2-10UC15  Spo2 Measurement Range: 35%~ 100 %  Measurement Accuracy: 70% ~ 100% ±2 %  Pulse Measurement Range: 30 ~ 250bpm  Manufacturer: CONTEC MEDICAL SYSTEMS CO., LTD</p>
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