Nonin CO-Pilot™

Wireless Handheld Multi-Parameter System (H500)

Quick Start Guide

NONIN

Refer to the CO-Pilot Wireless Handheld Multi-Parameter System (H500) Operator's Manual for complete instructions for use to fully understand the device, its operation, and the potential risks to user and patient.

Operator's Manual included on provided USB flash drive

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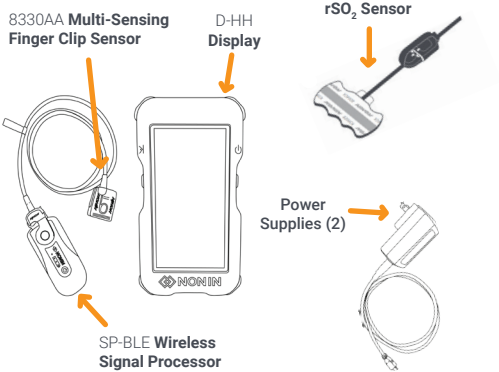
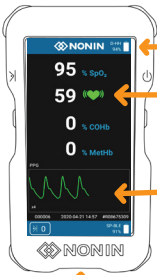
01 System Components



*rSO_2 sensors not included in standard configuration
**Not depicted: Data Download Cable and USB Flash Drive

02 Display Icons & Indicators

Multi-Sensing Display Screen



Display Battery Indicator

Pulse Signal Quality Indicator

Pulse Wave Form/ PPG

Display Charging Port

rSO_2 Display Screen

rSO_2 Histograms
Trending readings of the rSO_2 value over time

On/Off, Sleep Button

Session ID

Signal Processor Serial Number

Event Marker Button

Signal Processor Battery Life Indicator

Signal Processor (SP-BLE)

On/Off Button
Press briefly to check SP-BLE battery status

Sensor Lock

SP-BLE Charging Port

Bluetooth Indicator

Battery Life Indicator

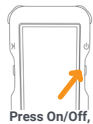
03 Initial System Setup

1. Charge display and signal processor per instructions in Section 9
2. Press and hold On/Off button on signal processor until green LEDs blink on and blue Bluetooth LED begins to blink
3. **Press and hold** On/Off,Sleep button on display until screen turns on
4. Connect sensor to signal processor and engage sensor lock (Figure 1)
5. System is now ready to take a measurement or to be put into Sleep Mode for future use

Figure 1

04 Taking a Measurement with CO-Pilot

1. Activate the display from sleep mode by briefly pressing the On/Off, Sleep button on the right side of the device (Figure 2)
2. When the display is activated, it will automatically be connected to the signal processor and the sensor will turn on
3. If the signal processor is not automatically activated, press and hold down the On/Off button on the signal processor
4. Place the sensor on the patient according to sensor instruction
5. When operation is complete, briefly press the On/Off, Sleep button on the display to end the session and put device into Sleep Mode; signal processor will enter Sleep Mode automatically



Press On/Off, Sleep button to activate display
Figure 2

05 Placing Disposable rSO_2 Sensor

1. Connect INT-100 to signal processor as shown in Figure 1
2. Connect 8204CA sensor to INT-100 and engage lock per Figure 3

Figure 3

3. Remove the protective backing from the sensor pad and gently, but firmly place the sensor above the eyebrow per Figure 4
4. Ensure sensor surface adheres to the skin to prevent light from traveling between emitting or receiving elements or ambient light from entering

NOTE

An improperly placed sensor may result in inaccurate readings.
If sensor does not adhere fully, sensor may result in inaccurate reading

Figure 4

06 Placing Finger Clip Sensor

1. Connect sensor to signal processor as shown in Figure 1
2. Select proper sensor size and use a clean, dry finger. Heavy lotions, sunscreen, dirt, oils and nail polish may alter accuracy
3. Gently squeeze open the sensor and insert the finger all the way into the sensor

07 Determining Pulse Signal Quality

Pulse signal quality can be determined by the color of the pulse waveform as shown.

Green = Good

Yellow = Marginal

Red = Insufficient

08 Checking Signal Processor Battery Status

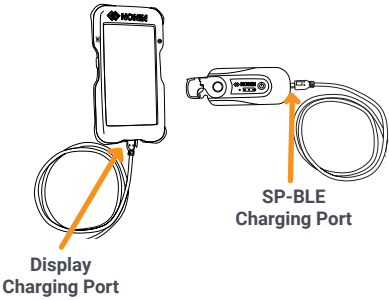
To check the signal processor battery status, quickly press the On/Off button on the signal processor. Green battery indicator lights will light indicating current battery status. Signal processor battery status can also be found on the display screen as shown in Section 02.

Signal Processor Battery Status Matrix

Battery Indicator	Battery Level
Three green lights lit	High (60-100%)
Two green lights lit	Medium (20-59%)
One green light lit	Low (5-19%), charge SP-BLE
One green light blinking	Critical (0-4%), charge SP-BLE
No Lights	Depleted or off

09 Charging the System

1. Charge the display and signal processor using the provided Nonin power supplies ONLY*
2. Insert power supply into respective ports shown below to charge.



*Do not use system while charging

10 Long Term Storage Mode

1. To place the display into long term storage mode, **press and hold** the On/Off, Sleep button on the display (Figure 2) until screen prompt appears

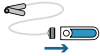
2. Choose "Power Off" on display screen. Screen will go black, display is now in long term storage mode

3. To place the signal processor into long term storage mode, press and hold the on/off button on the signal processor until all lights flash simultaneously. Signal processor is now in long term storage mode

Press and hold button to place Signal Processor in long term storage mode

Figure 5

11 Basic Troubleshooting



Sensor Not Connected to Signal Processor

Check that sensor is plugged into signal processor and sensor lock is engaged

Sensor Fault

Sensor may be inoperable, try another sensor

Inadequate Signal

Ensure sensor is properly applied to patient

Cannot Connect to Signal Processor

Check that signal processor is on, battery is charged, and in range of display

Error Code

Refer to Operator's Manual

12 COHb Quick Reference

Carbon monoxide (CO) is an odorless, colorless gas that can remain undetectable until exposure results in injury or death. CO poisoning can lead to a variety of clinical effects that resemble many neurological and cardiovascular conditions, leading to potential misdiagnosis.

Common Symptoms of CO Poisoning

1. Headache
2. Dizziness
3. Fatigue and Weakness
4. Loss of Consciousness
5. Nausea

Important Symptom Considerations

- A patient exposed to high concentrations for a short time may be less symptomatic than a patient who reaches the same COHb level after a prolonged exposure.
- Chronic poisoning is generally associated with the less severe symptoms.
- Some patients presenting with a carboxyhemoglobin level of 20% may be remarkably symptomatic, while others experiencing the same level of COHb% may exhibit only mild, equivocal symptoms.
- Low-level exposure can exacerbate angina and chronic obsutrctive pulmonary disease.
- Coronary artery disease patients are at risk for ischemia and MI even at low levels of CO.
- Severity of clinical condition is related to CO conentration, the duration of exposure, and the prevailing clinical disposition of the patient.
- Smokers present with higher levels of COHb than do non-smokers. The COHb level in non-smokers is approximately 1-2%. In smokers, a COHb of 3-8% would be considered normal, depending on severity of smoking.

Treatment

Carbon Monoxide: Half Life Elimination from Blood	
Room Air	240-360 minutes
Oxygen (100%)	80 minutes
Hyperbaric Oxygen (HBO)	22 minutes

13 COHB Exposure Treatment Decision Process

If CO exposure is NOT suspected:

- Noninvasive COHb values should NOT be used

If CO exposure IS suspected:

- Patient has signs and symptoms, transportation to the hospital is recommended even if the COHb is <10%
- Patient has COHb ≥10%, transportation to the hospital is recommended, even if asymptomatic

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https://www.nonin.com/support/co-pilot/

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