

## Spacelabs Healthcare Capnography Module (92517)



Quick Start Guide

Note: This reference guide is intended for a quick start of new alarm tool enhancements. Refer to the Operations Manual for more detailed information.

## Overview

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The 92517 Capnography Module is designed to measure the concentration of end-tidal CO<sub>2</sub> and aid in determining the patient's ventilator, circulatory, and metabolic status.

### Features:

- Mainstream and Sidestream monitoring modes.
- Measurement of end-tidal CO<sub>2</sub>, minimum CO<sub>2</sub>, and Respiratory Rate
- N<sub>2</sub>O and O<sub>2</sub> compensation to assure measurement accuracy.
- Automatically compensates for ambient barometric pressure assuring measurement accuracy.

## Mainstream EtCO<sub>2</sub> Monitoring

Mainstream EtCO<sub>2</sub> monitoring is used on intubated patients only.

The module uses specially-designed airway adaptors for adult/pediatric and infant patients and a CO<sub>2</sub> sensor cable. The CO<sub>2</sub> sensor cable has an LED light. The green LED indicates the sensor is ready for use.

**Airway Adapters  
Adult/Pediatric or Infant**



**CO<sub>2</sub> Sensor - with LED light**



## Mainstream EtCO<sub>2</sub> Monitoring (continued)

### To start mainstream Capnography monitoring:

1. Insert the module into the monitor housing.
2. Connect the mainstream connector to the module's mainstream port.
3. Snap the CO<sub>2</sub> sensor on the top of a new airway adaptor. It clicks into place when placed correctly.
4. Allow the module to warm up for a minimum of 10 seconds.
5. Connect the airway adaptor to the ventilator circuit.

**Mainstream port**





**CO<sub>2</sub> Sensor – with LED light positioned up**



**Note: The LED should be positioned pointing up, unless protected by a High Moisture Exchanger.**

## Sidestream EtCO<sub>2</sub> Monitoring

Sidestream EtCO<sub>2</sub> monitoring can be used on intubated patients using a ventilator airway adaptor sampling line or on non-intubated patients using a nasal cannula sampling line. The sidestream mode uses the Nomoline adaptor filter for either single or multi-patient use.

Nomoline Product Description	Picture	Usage	Replacement
Nomoline, P/N 015-0683-xx Sampling line with a male luer lock connector, single-patient use. Adult/Pediatric/Infant, 2.0 m		Intubated patients, maintenance	Single-patient use
Nomoline Adaptor, P/N 103-0234-xx Sampling line with female luer lock connector. Adult/Pediatric/Infant, 0.15 m		Intubated/spontaneous breathing patients	Multi-patient use

## Sidestream EtCO<sub>2</sub> Monitoring (continued)

### Light Emitting Gas Inlet (LEGI):

The Capno Module has a light emitting gas inlet (LEGI) which detects the presence of a sidestream Nomoline adaptor. The LEGI shows color-coded status information. A steady green light indicates system is ready for use.



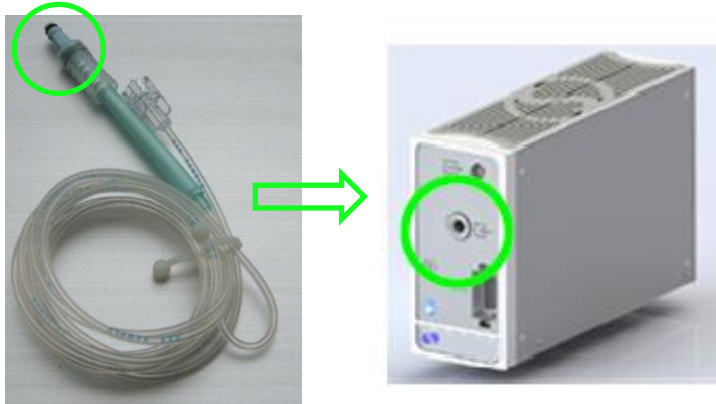
Indication	Status
Steady green light	System OK
Blinking green light	Zeroing in progress
Steady red light	Sensor error
Blinking red light	Check sample line

**Note:** RED light, either steady or blinking, may require replacement of the Nomoline adaptor.

## Sidestream EtCO<sub>2</sub> Monitoring (continued)

To start sidestream Capnography monitoring:

1. Insert the module into the monitor housing.
2. Connect the Nomoline sampling line to the inlet sample port.
3. Allow the pod to warm up for a **minimum of 10 seconds**.
4. Connect the other end of the sampling line to the patient or breathing circuit.



## Sidestream EtCO<sub>2</sub> Monitoring (continued)

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### Setting Alarms:

1. Touch **GAS →ALARM LIMITS**
2. Select an alarm: Apnea, RR, EtCO<sub>2</sub>, or MinCO<sub>2</sub>.
3. Turn **ON** the alarm, select the setting and adjust with the arrows.

### 'No Breath Detected' Alarm:

Once a Capnography waveform is established, if the waveform is lost for 30 seconds, a **"No Breath Detected"** message and an audible alarm will occur. Touch the **Acknowledge Alarms** button or re-establish the connection to silence the alarm.

### Suspend CO<sub>2</sub> sampling:

1. Touch **GAS →SETUP → SUSPEND CO<sub>2</sub>**
2. Confirm **YES**

The message **"Sampling Suspended – Patient is not monitored"** will appear on the display.



## Sidestream EtCO<sub>2</sub> Monitoring (continued)

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### Resume CO<sub>2</sub> sampling:

1. Touch **GAS →RESUME CO<sub>2</sub>**
2. Confirm **YES**

The Capnography waveform and measurement will resume.

It is recommended to suspend CO<sub>2</sub> sampling if the patient is:

- Not being monitored
- Is receiving nebulized treatment.

**Note: Suspending the CO<sub>2</sub> sampling during breathing treatments will extend the life of the Nomoline adaptor filter.**

## Selecting Gas Compensation:

1. Touch **GAS →COMP**
2. Touch **O<sub>2</sub> COMP** (if nitrous oxide is being delivered, turn N<sub>2</sub>O COMP ON)
3. The appropriate O<sub>2</sub> comp setting is determined by the % of O<sub>2</sub> the patient is receiving.
  - Off < 30%
  - 30% - 70%
  - 70% - 100%

Note: The presence of oxygen and nitrous oxide affect the measurement of CO<sub>2</sub> by infrared analysis. Appropriate compensation must be enabled to take accurate CO<sub>2</sub> measurements when increased levels of O<sub>2</sub> or N<sub>2</sub>O are present in the airway.

## Mainstream – Zeroing Procedure

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Zero ONLY when a GAS reading does not show 0%, or when an unspecified accuracy message shows.

To perform the zeroing procedure, snap a new mainstream airway adapter into the CO<sub>2</sub> sensor.

- Do not connect the airway adapter to the patient circuit.
- Before doing the zeroing procedure, let the module warm up for 10 seconds.
- Always do a pre-check after zeroing.

### Pre-Use Check:

- Make sure that the gas reading and waveforms on the monitor are correct before you connect the airway adapter to the patient circuit.
- Make sure that the patient circuit with the sensor is snapped firmly on the airway adapter.

## Sidestream – Zeroing Procedure

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Zero reference automatically calibrates on a regular basis. The module does the zeroing process automatically, by switching the gas sampling from the respiratory or circuit to ambient air.

During auto zero calibration:

- A “ZERO IN PROGRESS” message appears.
- Automatic zeroing is done every 24 hours.
- Zeroing takes less than 3 seconds to complete.

To start the manual zeroing procedure for either Mainstream or Sidestream:

1. Place the sampling line or sensor in room-air away from any gases or breath.
2. Touch **GAS → SETUP**
3. Touch **CAL → ZERO → YES.**

**Warning: Do not breathe near the airway adaptor or sampling line before or during the zeroing procedure to ensure the presence of 21% O<sub>2</sub> and 0% CO<sub>2</sub>.**

## Mainstream CO<sub>2</sub> Sensor

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### Cleaning and care instructions:

- Remove the disposable airway adapter before you clean the CO<sub>2</sub> sensor.
- Use a cloth moistened (not wet) with a maximum of 70% ethanol or a maximum of 70% isopropyl alcohol to clean the CO<sub>2</sub> sensor.
- Do not sterilize or immerse the CO<sub>2</sub> sensor in liquid
- Do not apply tension to the sensor cable.
- Do not operate the CO<sub>2</sub> sensor outside the specified operating temperature environment.



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Contact Information

Spacelabs Contacts

Technical Support: 800-522-7025 option #2

Field Service Engineer: \_\_\_\_\_

Clinical Education Consultant: \_\_\_\_\_

Sales Representative: \_\_\_\_\_