

Calibration Procedure: RAD CO2 Safety Alarms

This is a more detailed explanation of the calibration procedure found in the manual. Check your state or local code for calibration schedule requirements.

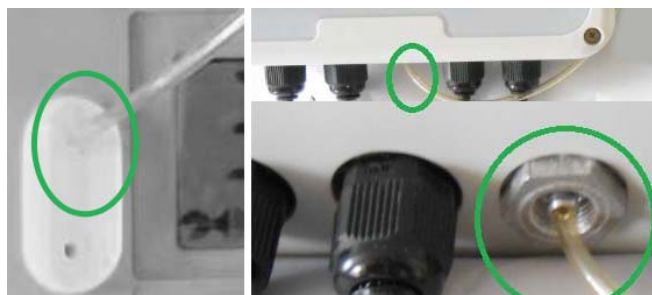
At a minimum, you should calibrate at least once a year.

There are 2 different calibration procedures depending on the altitude at which the device is to be used:

1. 0 - 3,000 ft. (900m): Perform Zero Calibration and Span Calibration.
2. 3,000+ ft.: Perform Zero Calibration only.

Before You Begin

1. For Zero Calibration, you will need a gas cylinder of pure nitrogen (0 ppm CO₂). For Span Calibration, you will need a 2nd cylinder of 4% CO₂.
2. Temporarily cover the buzzer hole in the upper right-hand corner of the SEU (sensor unit) and RDU (remote display unit) with a small piece of masking tape to minimize the alarm sound during calibration.
3. If calibration is to be performed in-situ, first inform building occupants that you will be testing the CO₂ alarm for several minutes.
4. Attach included tubing between the gas cylinders and the SEU calibration port as follows:
 - a. RAD-0102SX2 – Connect the tubing to the supplied plug and secure it over the air entry / calibration port on the front of the SEU.
 - b. RAD-0102/RAD-0200 – Connect the tubing to the calibration port on the bottom of the SEU.



A: RAD-0102SX2

B: RAD-0102/RAD-0200

Zero Calibration

1. Attach tubing between the nitrogen (0ppm CO₂) gas cylinder and the calibration port.
2. Turn on the gas regulator. Flow rate should be between 0.15-0.3 liters per minute.
3. Wait until the CO₂ reading on the SEU settles consistently at or near 0ppm CO₂ on the screen.
4. Press the Mode button until the “CALI” icon flashes.
5. Press Enter to enter the “Zero” calibration mode. The “CALI” icon and “ZEro” should be displayed on the screen.
6. Press and hold the Mode button for at least 10 seconds until “Calibrating” and “CO₂” are flashing simultaneously.
7. Zero calibration will begin. After approximately 5 minutes, the LCD will display either “PASS” or “FAIL”. If the LCD reads “FAIL”, repeat the steps again.
8. Press Enter. The display should now show 0ppm. Remove the nitrogen cylinder.



Span Calibration

Warning: You must be in a well-ventilated area before starting Span Calibration. Breathing 4% CO2 gas in an enclosed area can result in dizziness, shortness of breath, or unconsciousness.

Device cannot be span calibrated above 3,000 ft. (900m) altitude.

1. Attach tubing between the 4% CO2 gas cylinder and the calibration port.
2. Turn on the gas regulator. Flow rate should be between 0.15-0.3 liters per minute.
3. Wait until the CO2 reading on the SEU settles consistently at or near 4% CO2 on the screen.
4. Both Alarm 1 and Alarm 2 will sound.
5. Press the Mode button until the “CALI” icon flashes.
6. Press Enter 2 times to enter the “SPAn” calibration mode. The “CALI” icon and “SPAn” should be displayed on the screen.
7. Press and hold the Mode button for at least 10 seconds until “Calibrating” and “CO2” are flashing simultaneously.
8. Span calibration will begin. After approximately 5 minutes, the LCD will display either “PASS” or “FAIL”. If the LCD reads “FAIL”, repeat the steps again.
9. Press Enter to complete calibration. Remove the CO2 cylinder.
10. To reset the alarm, you must disconnect the SEU from the power source. Wait a few seconds, then plug it back in again.

If your unit fails either “ZErO” or “SPAn” calibration, please follow the procedure again before calling support.

