

## Applications

- Identify areas with low or substandard ventilation.
- Identify hidden energy savings in overventilated spaces.
- Determine if ventilation is a factor in air quality complaints.
- Locate the presence of combustion fumes from vehicles and appliances.
- Use as a reference to calibrate wall mounted CO<sub>2</sub> sensors.



## Features

- Patented dual beam, Absorption Infrared™ gas sensor ensures long term stability and durability.
- Record temperature, CO<sub>2</sub>, RH and graph recorded data with supplied software (Model I-7001D).
- Large, easy-to-read display. Temperature displayed in °F or °C. CO<sub>2</sub> displayed in ppm. Easily adjusted for altitude changes.
- Fast, simple calibration using external port and display. Calibrate with ambient air or bottled gas.
- Calibrate, set elevation, change °F or °C using on-board controls or optional computer interface (UIP kit model 2072)
- Flip out stand for desktop monitoring.
- Voltage output via RJ45 connector provides easy interface to most data loggers.
- Plug in AC power adaptor.
- Operates for up to 80 hours on four AA alkaline batteries (not included).
- Displays cfm-per-person ventilation rate based on CO<sub>2</sub> inside outside differential reading.

## I-7001

Equipped with a patented dual beam Absorption Infrared™ technology, the I-7001 is an easy-to-use CO<sub>2</sub>/temperature monitor designed for use in residential or commercial applications. With the ability to display CO<sub>2</sub> readings and calculate outside air ventilation rates in cfm/person, the monitor is an ideal tool for: identifying energy saving opportunities in over-ventilated spaces, determining if air quality complaints are due to insufficient ventilation, or locating the presence of combustion fumes generated from vehicles and appliances. Comes with a power adapter.



## I-7001D

Combines the I-7001 and Hobo data logger to provide you with everything you need to record and graph CO<sub>2</sub>, temperature, and relative humidity.

## SPECIFICATIONS

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### Method

Dual Beam Absorption Infrared™

### Sample Method

Diffusion or flow through (50 to 100 ml/min)

### Display-LCD

Independent CO<sub>2</sub> and temperature readings. Calculates and displays ventilation rates.

### General

#### Operating Conditions

- 32°F to 122°F (0°C to 50°C)
- 0 to 95% RH, non-condensing

#### Storage Temperatures

-4°F to 140°F (-20°C to 60°C)

#### Certification

FCC Class 15 Part B

#### Warranty

18 months parts and labor

### Performance-CO<sub>2</sub> Channel

#### Measurement Range

- 0 to 10,000 ppm display
- 0 to 4000 ppm voltage output

#### Display Resolution

±1 ppm

#### Accuracy

±50 ppm or 5% of reading, whichever is greater

#### Repeatability

±20 ppm

#### Temperature Dependence

±0.1% of reading per °C or ±2 ppm per °C, whichever is greater, referenced at 25°C.

#### Pressure Dependence

0.13% of reading per mmHg (corrected via user input for elevation)

#### Response Time

<60 seconds for 90% of step change

#### Warm-Up Time

<60 seconds at 72°F (22°C)

#### Calibration Interval

12 months, offset adjustment using single gas at 0 to 1000 ppm CO<sub>2</sub>. Full factory calibration available.

### Performance-Temperature Channel

#### Temperature Range

- Voltage output: 32°F to 104°F (0°C to 40°C)
- Display: 32°F to 122°F (0°C to 50°C)

#### Display Resolution

0.1°F (0.1°C)

#### Display Options

°F, °C, of off. Set with panel button.

### Accuracy

±2°F (±1°C)

### Response Time

20 to 30 minutes (case must equilibrate with environment)

### Calibration Interval

12 months, offset adjustment using temperature standard at 50°F to 86°F (10°C to 30°C). Full factory calibration available.

### Output-Analog

#### CO<sub>2</sub>

0 to 4 VDC, 1 mV/ppm (4000 ppm maximum)

#### Temperature

0 to 4 VDC linear, 32°F to 104°F (0°C to 40°C)

#### Output Impedance

100 ohms

### Digital Output

RS232 for use with CO<sub>2</sub> View graphing software

### Wiring Connection

One RJ45 to connector dual analog output plus digital output

### Power Supply

#### Battery Type

Four AA batteries (not included)

#### Battery Operation

80 hours (alkaline)

#### External

6 VDC from external AC/DC adapter (included)

#### Power Requirements

100 mA peak, 20 mA average from 6V

#### CFM/Person Ventilation Rate

#### Measurement

The I-7000 Series will calculate the outside air ventilation rate to a space based on the inside/outside CO<sub>2</sub> differential readings. Outside readings can be established by measuring outside levels and holding the "enter" button on the sensor for five seconds. The outside reading can also be manually set using the on-board keypad and display (default 400 ppm).

Accurate interpretation of the ventilation rate indicator requires a measuring two to three hours after occupancy has stabilized in a space or at a peak in daily CO<sub>2</sub> concentrations. In other conditions the indicator may tend to over estimate ventilation rates.

The ventilation rate display assumes a people activity level in the measured space similar to an office type environment (1.2 MET). If higher levels of activity are present the indicator may tend to under estimate ventilation levels.

### Accessories Ordering Information

#### 2077 Hobo Data Logger Kit (7001)

Small data logger that velcro's to the back of the I-7001. Includes CO<sub>2</sub> input with additional temperature and relative humidity measurement, graphing software and all necessary connection cables.