



# SP1000 CO2 Smart Probe

**Test Products International, Inc.**



**Uses NDIR CO2 sensor for accuracy**

**Connects to smart phone and uses the TPI Smart Probe App**

**Perform ambient CO2 level checks**

**Up to 6 SP1000 smart probes can connect to a single mobile device (most devices)**

**3 Year Limited Warranty**

# Test the TPI Advantage

**Visit [www.testproductsintl.com](http://www.testproductsintl.com)**

# TABLE OF CONTENTS

---

A. Introduction.....	1
B. Safety Considerations.....	1
C. Specifications.....	1
D. Instrument Overview.....	2
E. Taking a Measurement.....	3
F. Additional App Features.....	4
G. Drop Down Menu.....	5
H. Entering Company and Customer Information.....	5
I. Performing Ambient Air Tests.....	6
J. Maintenance.....	7
K. Trouble Shooting.....	7
L. Accessories.....	7
M. Warranty.....	8
N. Replacing Batteries.....	8

## A. INTRODUCTION

---


1. Congratulations: Thank you for purchasing TPI products. The SP1000 is easy to use and built to last. It is backed by a 3 year limited warranty.
2. Product Description: The SP1000 is an ambient CO2 “Smart Probe”. It connects to your mobile device and uses the TPI Smart Probe App to display temperature readings. Data can be exported to a CSV file as well.

## B. SAFETY CONSIDERATIONS

---

1. Never attach the SP1000 to a hot surface.
2. Never breath directly into the SP1000 while performing measurements. Doing so will skew the actual ambient reading.
3. Do not expose the unit to damp environments for extended periods of time.

## C. SPECIFICATIONS

SP1000 Smart Probe CO2 Meter Specifications	
Input Type	NDIR Sensor
Measurement Range	300ppm to 5000ppm
Accuracy	±(50ppm + 3% of measurement)
Resolution	1ppm
Operating Temperature	32°F to 122°F (0°C to 50°C)
Communication	Bluetooth version 4.2 (Use with TPI Smart Probe App) FCC ID: QOQBGM113 IC: 5123A-BGM113  209-J00204
Battery Type	AAA x 3
Battery Life	40 hours typical



## D. INSTRUMENT OVERVIEW



1. Sensing area.
2. SP341 status LED indicator.  
Orange and blinking = Bluetooth not connected  
Green and blinking = Bluetooth connected  
Blinking Red with either of the above = Low battery
3. Power Key. Press and hold to turn the instrument on.  
Press and hold to turn the instrument off.

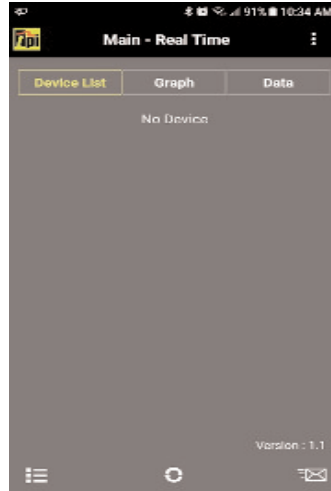
4. Built-in magnet. Attach to metal surfaces for hands free operation. Ensure surface is not hot.
5. Serial number location. Last three digits are the product identification number and marked in bold. Use this number to distinguish between models when several SP1000's are connected to a phone or tablet.
6. Screw to open battery compartment. Turn the screw counter clockwise until it is just above the compartment door. Lift on the screw to open the compartment.



## E. TAKING A MEASUREMENT

1. Download and install the TPI Smart Probe App onto your mobile device. Run the App. The “Main-Real Time” screen will be displayed.

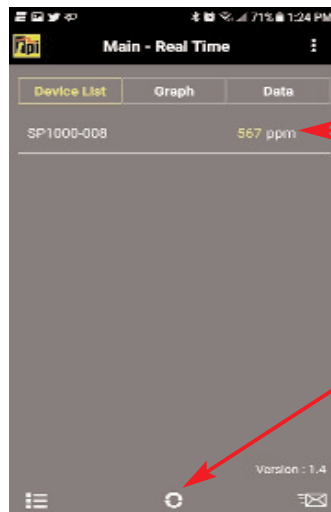
The App will say “No Devices” until a smart probe has been connected.



2. Press and hold the SP1000 On/Off key down until it turns on. The LED indicator will initially be orange and blink.

The SP1000 will auto connect to your mobile device. The LED indicator will turn Green and blink to indicate a link has been established. The App will display the model and ID number of the smart probe connected.

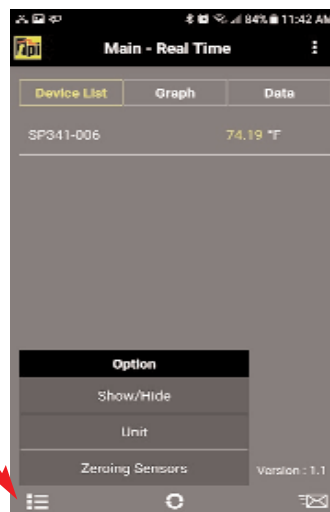
If the SP1000 does not auto connect tap refresh on the App.



Displays the measured CO2 in ppm.

Refresh  
This also clears any data accumulated.

3. Tapping the list icon allows optional functions to be accessed. These include Show/Hide, Unit, and Zeroing Sensors.



**Show/Hide** : Allows a device to be seen or hidden. Useful when multiple devices are connected.

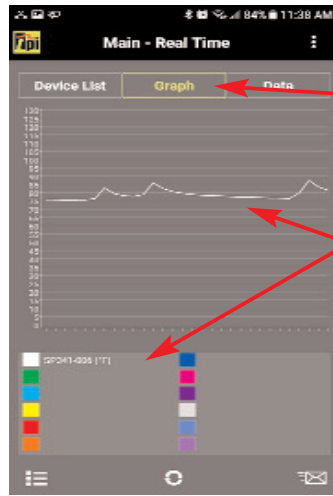
**Unit** : Select unit of measure. PPM is the only unit available.

**Zeroing Sensors**: This does not work with the SP1000. This function works with other smart probe models.

## F. ADDITIONAL APP FEATURES

1. Tapping “Graph” switches the display to graph mode. The temperature will be displayed as a line graph.

If multiple SP1000’s are being used, each will have a different color in the App.

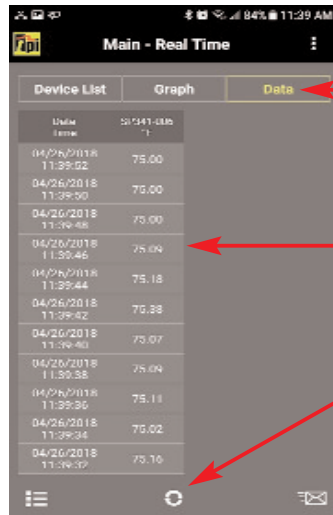


Tap “Graph”.

Each SP1000 is displayed in a different color in the line graph.

2. Tapping “Data” switches the display to show the measured data in a list format.

Each reading in the list will be dated and time stamped.

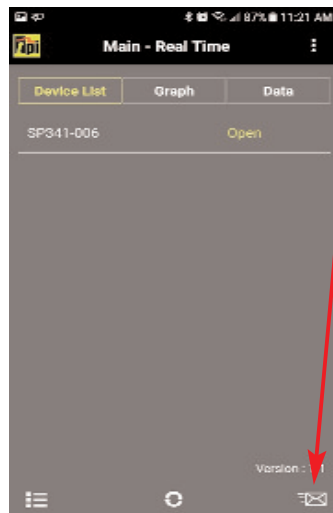


Tap “Data”.

The measurement data is shown in a list with a date and time stamp.

Tapping the Refresh icon clears this data.

3. Tapping the mail icon enables test data to be exported in a CSV file via email.



Tap the mail icon.

Test data will be exported in a CSV file via email.

4. Exported data in the CSV file display with the date and time stamp.

If a company and customer name has been entered they will be exported too. See page 5 for setting up the customer and company name.

Company Name :	Test Products Intl	
Company Address :	9615 SW Allen Blvd	
Customer Name :	Sample Customer	
Customer Address :	1111 Sample Way	
Building Name :	Bldg 3	
Building Address :	2222 Sample Ave	
Date	Time	SP1000-008(ppm)
5/9/2018	13:30:42	601
5/9/2018	13:30:40	599
5/9/2018	13:30:38	597
5/9/2018	13:30:36	595
5/9/2018	13:30:34	593
5/9/2018	13:30:32	590
5/9/2018	13:30:30	589
5/9/2018	13:30:28	587

## G. DROP DOWN MENU

The Smart Probe App has a Drop Down menu allowing access to additional app features.

1. Tap the Drop Down Menu icon to access additional features.

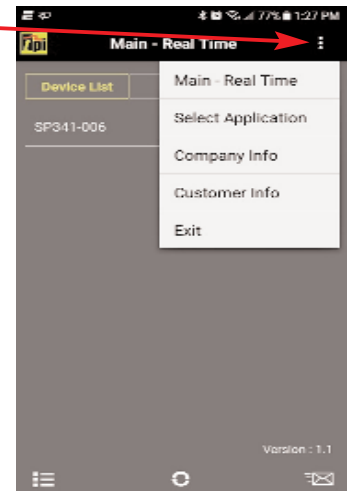
**Main - Real Time:** Tapping this returns you to the main screen.

**Select Application:** Tapping this pulls up sub applications for various smart probes. These include Temperature differential (SP341), Air Volume Calculation (SP565), and Tightness Test (SP620). Note: There are no sub applications for the SP1000.

**Company Info:** Allows you to enter your information to show up on the CSV file report. You can enter your company name, address, and email.

**Customer Info:** Allows you to enter the information of the customer the tests are being performed for. You can enter the customer name, address, and email. You can also enter the building information in cases where the tests are being performed somewhere off-site from the customer.

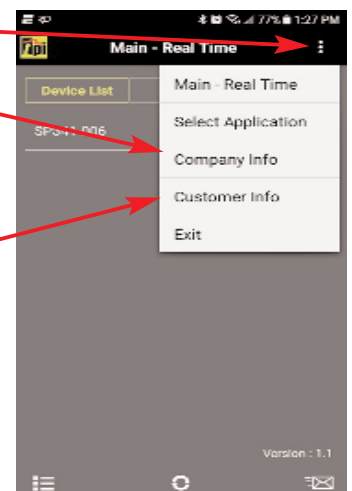
**Exit:** Closes the Smart Probe App.



## H. ENTERING COMPANY AND CUSTOMER INFORMATION

The Smart Probe App allows you to enter your company information and the customer information who the test is being performed for. This information will be exported in the CSV file (see page 4).

1. Tap the Drop Down Menu icon to access additional features.
2. Select "Company Info" to enter your information to show up on the CSV file report. You can enter your company name, address, and email.
3. Select "Customer Info" to enter the information of the customer the tests are being performed for. You can enter the customer name, address, and email. You can also enter the building information in cases where the tests are being performed somewhere off-site from the customer.

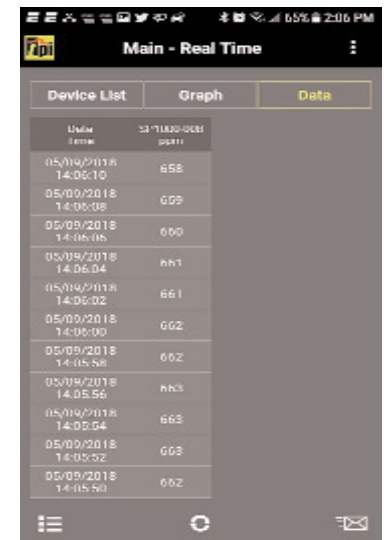


# I. PERFORMING AMBIENT AIR TESTS

1. Start the app on your smart device.
2. Turn the SP1000 on. If multiple SP1000's are being used turn each one on after one has connected to the smart device.
3. Move from room to room with the SP1000 allowing the readings to stabilize in each area. Take care not to breath directly into the sensor area. Doing so will cause the readings to rise and be inaccurate.

Another option is to leave the SP1000 in an area on a table face up or use the magnet on the back to attach it to something metal. This will prevent any chance of breathing into the sensor area and skewing the readings.

4. The measurement data can be exported in a CSV file for report generation.





## J. MAINTENANCE

---

1. Clean the surface of the instrument with a damp cloth.
2. Replace the three AAA batteries when the low battery indicator appears.

## K. TROUBLE SHOOTING

---

### Symptom

**CO2 seems inaccurate.**

### Probable Cause

- Low battery.
  - Make sure not to breath into the sensor area during tests.
  - Ensure connection with phone is working.
- 

**SP1000 does not turn on.**

- Dead or low batteries.
  - Not holding down power switch until unit turns on.
  - Defective POWER ON switch.
- 

**CO2 reads high all the time.**

- Make sure not to breath into the sensor during tests.

## L. ACCESSORIES

### **Included Accessories**

<u>Part Number</u>	<u>Description</u>
A1000SP	Soft pouch

### **Optional Accessories**

<u>Part Number</u>	<u>Description</u>
A925	Carrying case for 4 smart probes
A926	Carrying case for 1 or 2 smart probes

**Test Products International offers a variety of K-Type thermocouple probes for many applications. Visit [www.testproductsintl.com](http://www.testproductsintl.com) for additional information.**

## M. WARRANTY

This product is warranted to the purchaser against defects in material and workmanship for three years from the date of purchase.

**Covered by Warranty:** Repair parts and labor; or replacement of the product at company's option. Normal transportation charges to the purchaser are also covered.

**Not Covered by Warranty:** Damages to the product which are the result of abuse, improper use or maintenance are not covered. Any other expense, consequential damages, incidental damages, or incidental expenses including damages to property are not covered. Transportation expenses to the company are not covered.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

**To Obtain Warranty Performance:** Include with the product: your name, address, phone number, written description of the problem and proof of purchase date. Carefully package and return to:

**TPI, Inc.**  
9615 SW Allen Blvd.  
Beaverton, OR 97005  
USA  
503-520-9197  
www.testproductsintl.com

**TPI Canada**  
342 Bronte Rd. S., Unit 6  
Milton, Ontario L9T 5B7  
Canada  
905-693-8558  
www.tpicanada.com

**TPI, Europe Ltd..**  
Longley House, International Drive  
Southgate Crawley  
West Sussex RH10 6AQ England  
44(0) 1293 530196  
www.tpieurope.com

**Implied Warranties:** Any implied warranties including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to three years from date of purchase. To the extent any provision of this warranty is prohibited by federal or state law and cannot be preempted, it shall not be applicable. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## N. REPLACING BATTERIES

1. Turn the battery compartment screw counter clockwise until it is just above the compartment door. Lift on the screw to open the compartment.



2. Replace the three AAA batteries.



3. Re-install the battery cover and tighten the screw by turning it clockwise.

# NOTES

**Test Products International, Inc.**

9615 SW Allen Blvd., Ste. 104

Beaverton, OR 97005

Tel: 503-520-9197

[www.testproductsintl.com](http://www.testproductsintl.com)

**Test Products International, Ltd.**

342 Bronte Road South, Unit #6

Milton Ontario Canada L9T 5B7

Tel: 905-693-8558

[www.tpicanada.com](http://www.tpicanada.com)

**Test Products International Europe Ltd.**

Longley House, International Drive

Southgate, Crawley, West Sussex RH10 6AQ

Tel:: +44 (0) 1293 530196

[www.tpieurope.com](http://www.tpieurope.com)