

User Manual

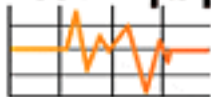


# EPC175

Particle Counter/Air Quality Meter



**Test Equipment  
Depot**



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Woburn, MA 01801

[TestEquipmentDepot.com](http://TestEquipmentDepot.com)

## Introduction

Congratulations on your purchase of the Triplett EPC175 Particle Counter/Air Quality Meter. This device is a particle counter/ air quality detector that includes several measurement types. It can detect PM2.5, PM10, HCHO, TVOC, temperature and humidity.

This device uses a laser weight scattering test method and includes a professional structure design and fan. It can precisely detect and monitor and display PM2.5 and PM10, and indoor air quality. HCHO can detect formaldehyde and TVOC can detect indoor harmful gas, alerting the user of any environmental pollution. In order to detect PM2.5, PM10, HCHO and TVOC at the same time, it adopts reliable power supply circuitry to ensure all measurements are precise and stable and operate for extended periods of time.

## Features

- 3.0" TFT LCD Display, 240\*400 Pixels
- Measures mass concentration of PM2.5/PM10
- Measures HCHO & TVOC
- Measures Temperature & Humidity
- 5000 groups of sampling data
- Auto Power Off (APO)

## Description

### METER DESCRIPTION



- **Set/Up Button:** Long press to enter/exit the settings page; Short press to switch measurement displaying in measure page, or to turn on in settings/memory page.
- **ON/OFF/ENTER Button:** Long press to startup/shutdown; Short press to enter/exit in settings/memory page.
- **Memory/Down Button:** Long press to enter/exit the memory page; Short press to switch measurement displaying in measure page, or to down on in settings/memory page.

## Operation

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### Power ON/OFF

- In shutdown mode, long press ON/OFF/ENTER key until the screen light, device will power ON.
- In startup mode, long press ON/OFF/ENTER key until the screen off, device will power OFF..

### Display Description (Measurement Data Areas)



- After powered ON and start up the meter will display and measure data continuously. The measurements consist of PM2.5, PM10, TVOC, HCHO, temperature and humidity readings. The meter will refresh the screen and toggle between a display of PM10, TVOC, and HCHO every 15 seconds. You can short press ON/OFF/ENTER key to switch display manually.
- PM2.5, PM10 and TVOC need 40 seconds warm-up time, during this time the last measurement recorded is displayed. The analog bar graph shows, air quality and has six alarm levels. If the air is polluted, the meter will alarm based on the reading value of measured data the display will change color. All alarms are based on real time data.



## Auto Power OFF (APO), Sleep and Wake-Up Modes

### Auto Power OFF/Sleep Mode

The meter can be set to auto power off or auto sleep. If there are long intervals without change in operation, the meter can auto power off or auto sleep to save consumption.

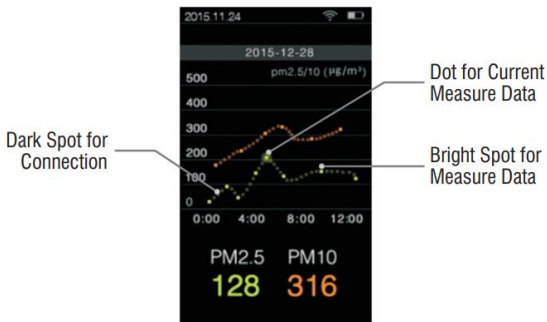
### Wake-Up (Button Press)

This meter can awake from shutdown status by long press of ON/OFF/ENTER key.

### Wake-up (Noise)

Noise also can be used to awaken the meter, for example striking table can awaken the meter from sleep status to measure status. This meter can awake by noise within 30 minutes after shutdown.

## Memory



In the measurement page a LONG PRESS of the MEM/Down button enters and exits the memory page.

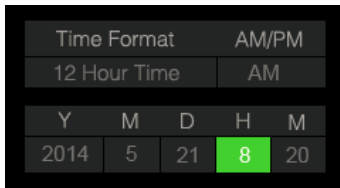
The MEMORY page will dynamically display the latest curve of measurement data. To view the static measurement data, SHORT PRESS of the ON/OFF/ENTER button.

In static MEMORY page, the meter displays the static curve of measurement data, a SHORT PRESS of the Up/Down button will view the detail of historical data one by one.

The meter can record memory data as many as 5000 points, which contents include PM2.5, PM10 and record times. In MEMORY page, one curve includes (8) data point/measurements. Indications are – a bright spot for the data, dark spot for connection, and a dot for the current data. A SHORT PRESS of the Up/Down button will display before and after historical data.

## Settings

### Time Settings



Time can be set up hourly (12 hours or 24 hours), AM/PM, date and time. Short press Up/Down key to change time settings, and short press ON/OFF/ENTER key to confirm, after confirm all setting items then exit and back to the main menu of settings page.

### Auto Power Off/Auto Sleep Settings



APO can set up auto power off/auto sleep time as 10~120 minute or no auto power off/auto sleep.

### Unit Settings

Temperature units can be set up for unit of temperature as Celsius(°C) or Fahrenheit(°F), the default is Celsius.

## Alarm Settings

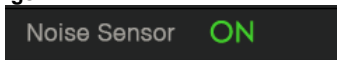
Alarms can be set for the start point of PM2.5 alarm as 10ug/m<sup>3</sup>, 35ug/m<sup>3</sup>, 75ug/m<sup>3</sup>, 150ug/m<sup>3</sup>, 200ug/m<sup>3</sup> or no alarm, which default is 35ug/m<sup>3</sup>. If PM2.5 alarm is enable, the meter will beep when concentration of PM2.5 is so high as to beyond the set start point of PM2.5 alarm.

## Brightness Settings



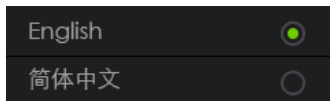
Screen Brightness can be set, there are (5) levels of screen brightness.

## Noise Sensor Settings



Enable/disable noise sensor. If enabled, device can be awake from shutdown/sleep status by noise sensor.

## Language Settings



Language can be set to English or Chinese, default is English.

## Air Quality Standard

**PM2.5 Concentration and Corresponding Index Color Table**

| Color         | Green                 | Yellow                 | Orange                  | Red                      | Purple                   | Deep Purple           |
|---------------|-----------------------|------------------------|-------------------------|--------------------------|--------------------------|-----------------------|
| Concentration | 0~35μg/m <sup>3</sup> | 35~75μg/m <sup>3</sup> | 75~150μg/m <sup>3</sup> | 150~200μg/m <sup>3</sup> | 200~250μg/m <sup>3</sup> | >250μg/m <sup>3</sup> |
| Air Quality   | Good                  | Normal                 | Mild Polluted           | Middle Polluted          | Heavy Polluted           | Serious Polluted      |

**PM10 Concentration and Corresponding Index Color Table**

|               |                                |                                  |                                   |                                   |                                   |                                |
|---------------|--------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|--------------------------------|
| Color         | Green                          | Yellow                           | Orange                            | Red                               | Purple                            | Deep Purple                    |
| Concentration | 0~75 $\mu$<br>g/m <sup>3</sup> | 75~150 $\mu$<br>g/m <sup>3</sup> | 150~300 $\mu$<br>g/m <sup>3</sup> | 300~400 $\mu$<br>g/m <sup>3</sup> | 400~500<br>$\mu$ g/m <sup>3</sup> | >500 $\mu$<br>g/m <sup>3</sup> |
| Air Quality   | Good                           | Normal                           | Mild<br>Polluted                  | Middle<br>Polluted                | Heavy<br>Polluted                 | Serious<br>Polluted            |

**PM10、CO<sub>2</sub>、HCHO、TVOC Concentration and Corresponding Index Color Table**

|                                  |                         |                           |                           |
|----------------------------------|-------------------------|---------------------------|---------------------------|
| Color                            | Green                   | Orange                    | Red                       |
| CO <sub>2</sub><br>Concentration | 0~800ppm                | 800~1500ppm               | 1500~9999ppm              |
| HCHO<br>Concentration            | 0~0.05mg/m <sup>3</sup> | 0.05~0.1mg/m <sup>3</sup> | 0.1~5.00mg/m <sup>3</sup> |
| TVOC<br>Concentration            | 0~0.6mg/m <sup>3</sup>  | 0.6~1.8mg/m <sup>3</sup>  | 1.8~9.99mg/m <sup>3</sup> |
| Air Quality                      | Good                    | Normal                    | Bad                       |



## Specifications

|   |  |
|---|--|
| <b>Particle Measure</b>                   |  |
| Particle Channels                         | PM2.5/PM10   |
| Mass Concentration Range                  | 0 ~ 2000 $\mu$ g/m <sup>3</sup>                                    |
| Resolution                                | 1 $\mu$ g/m <sup>3</sup>   |
| <b>HCHO</b>                               |  |
| Range                                     | 0.00~5.00 mg/m <sup>3</sup>  |
| Accuracy                                  | $\pm$ 5% F.S   |
| Resolution                                | 0.01 mg/m <sup>3</sup>   |
| <b>TVOC Measure</b>                       |  |
| Range                                     | 0.00~9.99 mg/m <sup>3</sup>  |
| Accuracy                                  | $\pm$ 5% F.S   |
| Resolution                                | 0.01 mg/m <sup>3</sup>   |
| <b>Temperature &amp; Humidity Measure</b> |  |
| Temperature Range                         | -20 ~ 70°C (-4 ~ 158°F)  |
| Temperature Accuracy                      | $\pm$ 2°C  |
| Temperature Resolution                    | 0.1°C  |
| Humidity Range                            | 0 ~ 100%RH   |
| Humidity Accuracy                         | $\pm$ 3.5%RH (20 ~ 80%RH)<br>$\pm$ 5%RH ( 0~20%RH or<br>80~100%RH) |
| Humidity Resolution                       | 0.1%RH   |
| <b>Intelligent Sensor</b>                 |  |
| Noise Detect Sensor                       | A slight noise can awaken device                                   |
| <b>Power</b>                              |  |
| Battery                                   | 2400mAh Recharge Li-ion Battery                                    |
| Work Time                                 | Able to continue work almost 5 hours                               |
| Charging                                  | USB 5V/1A  |
| Charging Time                             | Almost 2 hours when shutdown                                       |
| Auto Sleep                                | Able to set auto sleep time  |

| Others              |  |
|---------------------|--|
| Display             | 3.0" TFT LCD Display, 240 * 400 Pixels |
| Data Storage        | 5000 groups of sampling data           |
| Work Temperature    | 0 ~ 50 °C                              |
| Storage Temperature | -10 ~ 60 °C                            |
| Size                | 85 * 75 * 155                          |
| Weight              | 360g                                   |

## ***Warranty***

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Triplett / Jewell Instruments extends the following warranty to the original purchaser of these goods for use. Triplett warrants to the original purchaser for use that the products sold by it will be free from defects in workmanship and material for a period of (1) one year from the date of purchase. This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way or purchased from unauthorized distributors so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed.

Accessories, including batteries are not covered by this warranty

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