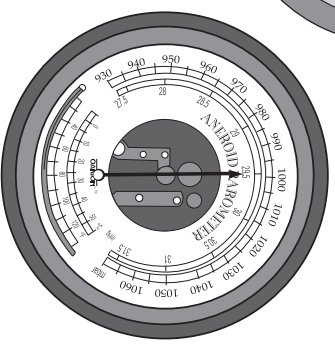
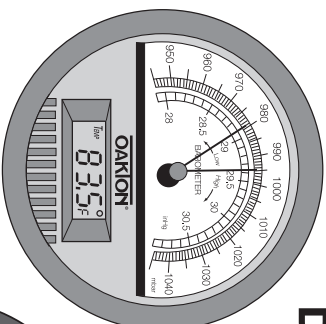


OPERATING INSTRUCTIONS

OAKTON 03316-70, -72, and -80

# Wall-Mount Barometers



Printed in the U.S.A. 4/00

**OAKTON**<sup>®</sup>

**OAKTON**<sup>®</sup>

## Table of Contents

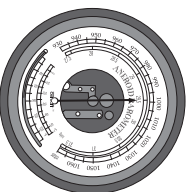
1. Introduction.....	3
2. Installation.....	4-5
3. Operation.....	6-9
3.1 Setting the reference needle.....	6
3.2 Sea level correction.....	7
3.3 Temperature readings.....	8
3.4 °F/°C scale selection (03316-80 only).....	9
4. Precautions.....	10
5. Specifications.....	11-13
6. Accessories.....	14
7. Warranty.....	15
8. Return of Goods.....	15

## 1. Introduction

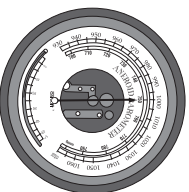
Thank you for purchasing an OAKTON Barometer. You have one of three models. All models are ideal for monitoring impending weather changes and temperature. They are intended for indoor use only.

Aneroid barometers 03316-70 and -72 feature a built-in bimetallic element (which provides temperature compensation for the aneroid capsule) and a glass thermometer.

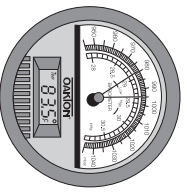
Barometer 03316-80 features a °F/°C selectable digital display.



Aneroid barometer with inches Hg scale  
(model number 03316-70)



Aneroid barometer with mm Hg scale  
(model number 03316-72)

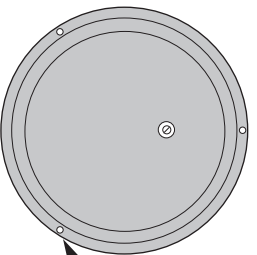


Barometer with digital thermometer  
(model number 03316-80)

## 2. Installation

### 2.1 Models 03316-70, -72

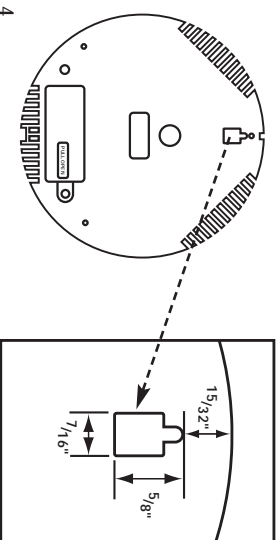
To wall mount your instrument, place a nail or screw through each of the three mounting holes along the outside of the instrument.



Instrument measures  $7\frac{7}{8}$ " dia  
Mounting holes are  $\frac{1}{8}$ " dia,  $\frac{1}{8}$ " away from product edges

### 2.2 Model 03316-80

**Mounting without the bracket:**  
Simply hang up the barometer from the hole on the top back of your instrument.



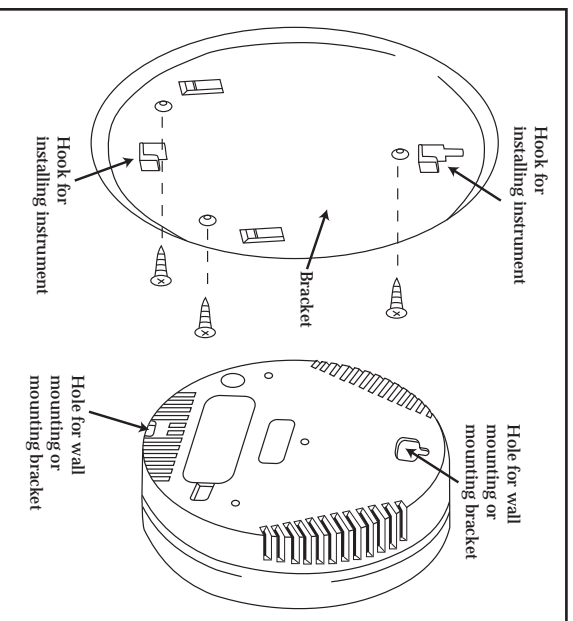
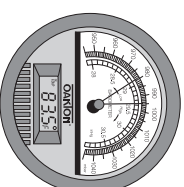
4

### 2.2 Model 03316-80, cont.

**Mounting with the bracket:**

Model 03316-80 includes a wall mounting bracket for more permanent mounting.

1. Mount the bracket on a wall with the screws (see diagram below).
2. Slide the holes on the back of the instrument over the bracket hooks (see diagram below).



5

### 3. Operation

Barometric pressure readings require no external power.

**Note:** “High pressure” and “low pressure” are relative terms. There is no distinct point on the scale that clearly defines where low pressure and high pressure begins, and vice versa.

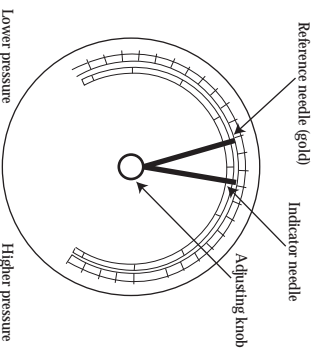
#### 3.1 Setting the reference needle

Your barometer features a reference needle (gold) and an indicator needle.

- The **reference needle** shows where the barometric pressure started.
- The **indicator needle** shows the current barometric pressure.

Use the adjusting knob on the front center of the unit to align the gold reference needle on top of the indicator needle. After several hours, the indicator needle will move upward or downward, or remain still.

- Upward movement means improved weather
- Downward movement means deteriorating weather (rain or snow).
- No movement means no weather change



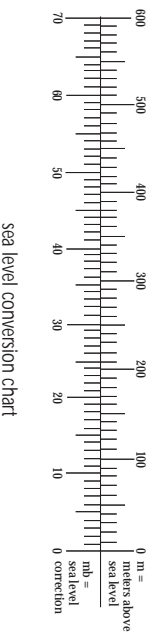
#### 3.2 Sea level corrections

Since air pressure changes with altitude, you must compensate your barometer accordingly. The higher you are above sea level, the lower (to the left) the indicator needle will move on the barometer.

**Example:** At an altitude of 100 meters (330 feet), the barometer will drop about 12 millibar (mb). To compensate for that altitude, simply add back the 12 mb. Therefore, a reading of 1000 mb at sea level becomes 1012 mb at 100 meters altitude (see the sea level conversion chart below).

To adjust the barometer to your altitude, turn the adjusting screw on the back center of the instrument to adjust the indicator needle.

We recommend that you adjust your barometer after unpacking, and again about once a year.



### 3.3 Temperature readings

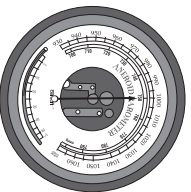
#### Models 03316-70, -72

These models feature a glass thermometer; no external power or temperature adjustments are required.

Model 03316-70 has both °F and °C scales.

Model 03316-72 has a °C scale only.

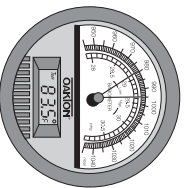
Note that these models feature a bimetallic element for temperature compensated barometric pressure readings.



#### Model 03316-80

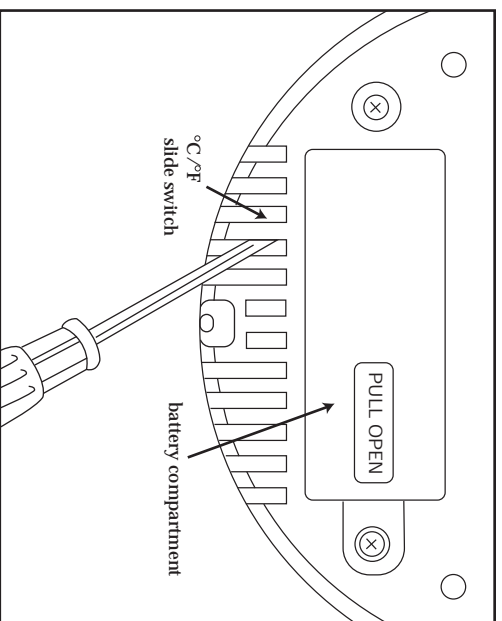
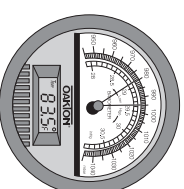
Although the barometric pressure scale requires no batteries or external power to operate, this model requires one 1.5 V AA battery to operate the digital thermometer. Battery life is approximately one year.

To change the battery, open the lid on the back of the barometer and insert the AA battery (see diagram on page 9). The positive (+) and negative (-) poles are shown at the bottom of the battery compartment.



### 3.4 °F/°C scale selection (Model 03316-80 only)

This instrument is factory set to read temperature in °C. To change to °F, locate the switch under the vents on the back panel (fourth opening from the left). Move the switch to the left with a screwdriver. To return to °C, set the screwdriver into the third opening from the left and move the switch to the right. See diagram below.

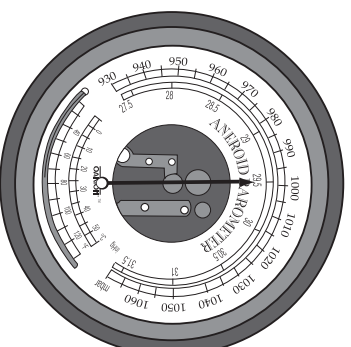


## 4. Precautions

1. Handle with care. Your instrument uses a precise mechanism to expand and contract the pressure chamber. Rough treatment can damage the mechanism.
2. Avoid direct contact with water and high levels of condensation. This instrument is not waterproof, and its vents are intended only for air circulation.
3. Because the thermometer is also made with precision parts, the instrument must not be stored in extreme temperatures. Avoid rapid temperature changes and strong physical shocks. The instrument must not be placed near heating units or in direct sunlight.
4. For accurate barometric pressure readings, keep the instrument in a vertical position.
5. Dismantling the instrument can affect its accuracy.
6. Remove stains with a soft cloth and mild detergent.
7. Never use in environments that contain solvents like acetone, benzene, alcohol, or acids and bases.

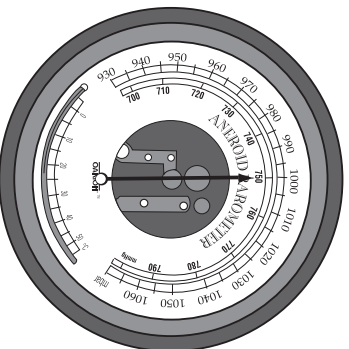
## Specifications, cont.

<b>Model number</b>	03316-70
<b>Barometric pressure</b>	
<b>Range</b>	930 to 1070 mbar / 27.5" to 31.6 "Hg
<b>Resolution</b>	1 mbar / 0.1 "Hg
<b>Accuracy</b>	±1 mbar / ±0.03 "Hg
<b>Temperature</b>	
<b>Range</b>	-5 to 55°C / -22 to 132°F
<b>Resolution</b>	1°C / 2°F
<b>Accuracy</b>	±1°C / ±1.8°F
<b>Sensor</b>	kerosene filled glass thermometer
<b>Altitude</b>	use between sea level and 2000 feet
<b>Power</b>	none required
<b>Case</b>	brass
<b>Dimensions</b>	7/8" dia x 2 1/8" D
<b>Shpg wt.</b>	3 lbs



## Specifications, cont.

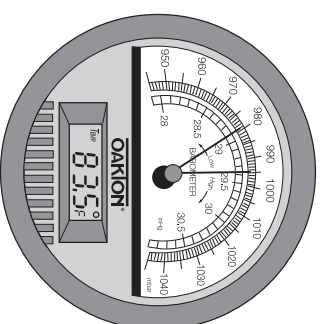
Model number	03316-72
Barometric pressure	
Range	930 to 1070 mbar / 698 to 802 mm Hg
Resolution	1 mbar / 0.1 "Hg
Accuracy	±1 mbar / ±0.03 "Hg
Temperature	
Range	-5 to 55°C
Resolution	1°C
Accuracy	±1°C
Sensor	kerosene filled glass thermometer
Altitude	use between sea level and 2000 feet
Power	none required
Case	brass
Dimensions	7 $\frac{1}{8}$ " dia x 2 $\frac{1}{2}$ " D
Shpg wt.	3 lbs



12

## Specifications, cont.

Model number	03316-80
Barometric pressure	
Range	945 to 1045 mbar / 27.9" to 30.9 "Hg
Resolution	0.5 mbar / 0.1 "Hg
Accuracy	±1 mbar between 970 to 1030 mbar; ±2 mbar beyond this range
Temperature	
Range	-20 to 60°C / -4 to 140°F
Resolution	0.1°C or °F
Accuracy	±1°C / ±1.8°F
Sensor	thermistor (display is digital LCD)
Power	One 1.5 V AA battery (included) battery life approx. one year
Case	ABS plastic
Dimensions	5 $\frac{1}{4}$ " dia x 1 $\frac{1}{4}$ " D
Body	6 $\frac{1}{8}$ " OD x $\frac{1}{8}$ " D
Flange	
Shpg wt.	2 lbs



13

## 6. Additional models

**WD-03316-70** Aneroid barometer with inches Hg scale

**WD-03316-72** Aneroid barometer with mm Hg scale

**WD-03316-80** Barometer with digital thermometer

To order additional barometers, contact your OAKTON distributor.

## 7. Warranty

Oakton Instruments warrants this product to be free from significant deviations in material and workmanship for a period of six months from the date of purchase. If repair is necessary and has not been the result of abuse or misuse within the warranty period, please return by freight pre-paid and amendment will be made without charge. The Customer Service Department will determine if the product problem is due to deviations or customer abuse. Out of warranty products will be repaired on a charge basis.

## 8. Return of Goods

Authorization must be obtained from our Customer Service Department before returning items for any reason. When applying for authorization, please include data regarding the reason the items are to be returned. For your protection, items must be carefully packed to prevent damage in shipment and insured against possible damage or loss. We will not be responsible for damage resulting from careless or insufficient packing. A restocking charge will be made on all unauthorized returns. NOTE: We reserve the right to make improvements in design, construction, and appearance of products without notice.