

ALTIMETER-BAROMETER

User Manual

Model BKT381/B381

Thanks for your purchase of the Altimeter and Barometer, this precision unit is designed durably for your climbing activities in outdoor use, please read this manual thoroughly to maximize its best performance.

1. Introduction

This product is made on the physical principles of i) the weight of the atmosphere acting on all parts of the earth, ii) and the higher the site, the shorter the column of air and hence its weight and pressure, iii) weather change due to air pressure variation transferable via high precision mechanical gearing to the pointer displaying on the dial of altimeter/barometer, it serves to measure accurately for site altitudes (absolute altitude), height differences, atmospheric pressure and for weather forecasting.

With the features of portable, maintenance-free, and battery needless, the altimeter/barometer is robust, reliable, safety and always ready for use.

Prior to reading, tap the lens slightly may help check the exact dial pointer.

2. Parts Description and Features

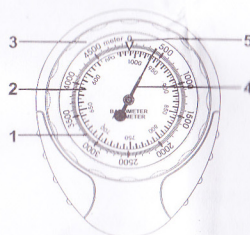


Figure 1 Meter/hPa version

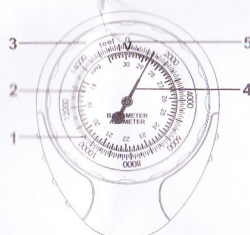


Figure 2 Feet/inHg version

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II. Barometer

I) Weather Trends

This barometer measures the actual barometric value automatically pointed on the dial and normally:

1. A rapid rise in atmospheric pressure typically indicates temporary fine weather can be expected.
2. A rapid drop in atmospheric pressure typically indicates incoming weather disturbances and therefore possible showers of short time.

Notes: Geographic location, temperature, humidity, wind direction, and even the season may influence the weather to certain degree.

II) Weather Reference

Southeast rains with high winds	1050 hPa, (788mmHg)	Continued cool, warmer and cloudy tomorrow
Clear tonight, continued cool with variable winds	1040 hPa, (780mmHg)	Fair and warmer, followed by wind and rain
Generally fair, probably cool with variable winds	1030 hPa, (773mmHg)	Storm brewing in the direction of the wind
Fair with brisk winds which will diminish	1020 hPa, (765mmHg)	Cloudy and warmer followed by unsettled
Fair with fresh winds tonight and tomorrow	1010 hPa, (758mmHg)	Unsettled, increasing winds and warmer
High winds with cool wave preceded by squalls	1000 hPa, (750mmHg)	Clearing, slight squalls fair and cooler tomorrow
Clearing with high winds and cool wave	990 hPa, (743mmHg)	Falling below 980 hPa indicates a severe storm, in winter snow or cold wave in 24 hrs.
Clearing and colder	Lower	

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III. Alti-barometer

The reduced atmospheric pressure at sea level on the basis of your site can be determined as follows:

1. Set the correct geographic altitude of your site
2. Read off under the zero (0 meter) line the corresponding reduced atmospheric pressure at sea level from the barometer scale
3. Measures a higher or lower pressure situation by calculating the difference between the reduced and the standard pressure (1013.25 hPa/mbar)
4. Measures the site height by turning the adjuster ring to zero (0 meter) line exactly upon the current atmospheric pressure at sea level (the current atmospheric pressure at sea level normally available from airports weather stations and port stations etc.)

Notes: i) By the ICAO standards, the international standard value for the reduced atmospheric pressure at sea level is 1013.25 hPa (mbar), 760 mmHg or 29.92 inHg. Air pressures below this value are referred to as low pressure, those above it as situations of high pressure. ii) For valid statement of atmospheric pressure and weather trends at different site altitudes, please refer to the reduced air pressure (to the standard value of 1013.25 hPa/mbar, 15°C).

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- 1 --- height scale
- 2 --- barometer scale
- 3 --- adjuster ring
- 4 --- pointer
- 5 --- zero line

Notes: The model BKT381 combines with thermometer (°C or °F) and compass.

3. Function Description

I. Altimeter

I) Absolute Altitude Measure

If the altitude reading is different from the current one, the unit can be manually calibrated to reflect the actual altitude level.

1. Turn the adjuster ring
2. Point the exact measure where you stand

Notes: Refer the actual site altitude to maps, footpath signs or source available; Air pressure variations /weather changes may constantly affect the altitude reading hence the necessity to compare the known reading of the heights occasionally while climbing or walking.

II) Altitude Change and Measure

1. Set the pointer to zero (0 meter/feet) where you start
2. Measures the height difference during your move

4. Technical Data

- I) Units of measurement: metres (m)/hPa or feet (ft)/inHg
- II) Measuring range: 0~5000m/0~16000ft & 580~1040hPa/18~33inHg
- III) Resolution: 20m/100ft increments
- IV) Reference temperature: +22°C...+/-2°C
- V) Operating temperature: -20°C~+40°C or -4°F~+140°F
- VI) Storage conditions: -30°C~+65°C; <90%RH
- VII) Weight: 90g or 3.2oz
- VIII) Dimensions: 85(l)X68(w)X28(h)mm/ 3.34(l)X2.6(w)X1.09(h)inch
- IX) Dial Size: Ø60mm/2.36inch

Specifications are subject to change without further notice

5. **Warranty:** This instrument is manufactured free from any defect in material and workmanship.

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