

# Pressure

The atmospheric pressure at any point on the Earth's surface is proportional to the weight of the air above it. Pressure decreases with height. We use hectopascals (hPa) and tenths to report atmospheric pressure in the UK.

You can measure pressure with a barometer at your station, so long as it is:

- ✓ not exposed to rapid changes in temperature;
- ✓ not exposed to direct sunlight;
- ✓ installed in a fixed position where it will not be knocked, jolted or vibrated;
- ✓ wall-mounted 120 cm above floor level if possible.



*Precision aneroid barometer*

✓ **NEVER LEAVE A BAROMETER STANDING FREE ON A DESK OR TABLE**

*Older barometers may show the pressure reading in millibars (mb).  
You do not need to convert, as 1 mb equals 1 hPa.*

## Reading a precision aneroid barometer (PAB)

### Step 1

Press the 'On' button to light up the cathode ray unit.

### Step 2

Adjust the knob on the side until the dot and line on the cathode ray unit just breaks (or the two red triangles just flicker).

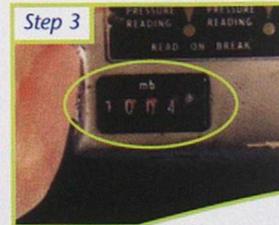
- If the dot and line are touching when the unit is first lit up, or the red triangle points up, increase the pressure reading by turning the knob clockwise.
- If the dot and line are wide apart (see Step 2a) or the red triangle points down, decrease the pressure reading until they touch by turning the knob anti-clockwise. Then turn the knob slowly clockwise until the dot and line just break or both triangles just flicker.

### Step 3

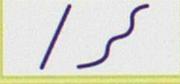
Atmospheric pressure is shown in hectopascals and tenths on the counter; if this is halfway between two numbers, record the lower value. This is your 'as-read' pressure reading, which must be corrected to get your station-level pressure.

### Step 4

First, correct for instrument error using the card issued with the PAB for temperature differences. This gives your station-level pressure. Then correct to get pressure at mean sea level using the card unique to your station.



This table shows the codes for sending regular observations of pressure change during the three hours before your observation.

Code	Pressure trace	In plain language	Change of pressure over three hours
0		Rising then falling	The same or higher
1		Rising then steady, or rising then rising more slowly	Higher
2		Rising steadily or unsteadily	Higher
3		Falling or steady, then rising; or rising then rising more quickly	Higher
4		Steady	The same

Code	Pressure trace	In plain language	Change of pressure over three hours
5		Falling then rising	The same or lower
6		Falling then steady, or falling then falling more slowly	Lower
7		Falling (steadily or unsteadily)	Lower
8		Steady or rising, then falling; or falling then falling more quickly	Lower