

Setting Procedure for the Davis Perception II Barometer

www.starpath.com/barometers

When the instrument is first turned on, or whenever the power is lost completely from the instrument (adaptor removed and no good 9v backup battery installed), then the instrument must be reset to the correct local pressure. You can choose to use station pressure or sea level pressure, it does not matter.

You can obtain accurate sea level pressure for your location at www.starpath.com/barometers, a resource that works worldwide. If you wish to use station pressure then you must correct (reduce) the sea level pressure according to your elevation. The site above will give you precise ground elevation, then you must add to that the “removal” height of your barometer above the ground. Once you have this total elevation, you can enter it in the link above and it will tell you how much you have to reduce the sea level pressure to get an accurate station pressure.

For example, if you find that at the time of your setting the accurate sea level pressure at your location is 1012.8 mb, and you choose to set the instrument to sea level pressure, then you can just set it to that value, and you are done. All subsequent readings will reflect actual changes in the sea level pressure for your location, so long as you do not change the elevation of the instrument.

If you do change the elevation, then the pressure will change at a rate of 0.44 mb per 12 ft, which is the height of a typical building floor, leading to the jingle “Point four-four per floor.”

If on the other hand you want to read the actual pressure at your location, which is called the station pressure, then you have to account for elevation in this calibration, since the official pressures reported are always given in the sea level equivalent. At a higher elevation, the station pressure will be lower. If your elevation were 450 ft above sea level and the barometer was located 9 ft above the ground, then your total elevation is 459 ft, and from the link above you learn the correction is -16.7 mb. Thus instead of setting your instrument to 1012.8, you would set it to $1012.8 - 16.7 = 996.1$ mb, which is the correct station pressure at the moment. From then on, the changes you see on your barometer reflect the changes in the station pressure at your location.

Procedure:

When you turn on the Perception II for the first time, the pressure will generally be fairly close to the correct station pressure, but not exact. Suppose you turn it on and it reads 998.5 mb, when you know the correct station pressure at the moment is 996.1, as outlined above. Then do this;

(1) Power it up and you will see all display options lighted for a few seconds, then it will default to showing pressure in inches of mercury on the left bottom, with time on the middle right.

(2) Press Bar to display pressure on the middle right.

(3) Then press Units twice to show mb. this will then show the pressure in tenths of mb on the middle right. Record the value that is being shown for the pressure, in this example say it reads 998.5 mb. The difference between 998.5 and 996.1 (-2.4 mb) is your offset, and this too should be recorded. If you later have to reset the instrument without access to accurate data, this offset would be your starting point.

(4) Press and hold down the Enter button. the pressure will start to flash. After about 8 seconds the left digit will start to flash, stop pressing that button for a second and press again to move to the next digit. Once you get to the digit you want to change, keep holding the Enter button down and it will increment that digit till you get to what you want. Then lift a second, move to next digit and set them all.

(5) Once the pressure is right, you can just stop, and it will reset itself to the new pressure and you are done.