



Absolute vs. Gauge Pressure Dataloggers

Prior to installing or using Track-It™ Dataloggers, please read the following Application Notes which can be downloaded from our website:

Track-It Pre-Installation Checklist and Installation of Drivers and Track-It Software

http://www.monarchinstrument.com/KB/DataLoggers/Track-It/TrackIt_Install%20Support.pdf

that covers 99.99% of issues relating to installation of dataloggers, especially on newer computers.

When installing drivers and software, do not have a datalogger plugged in.

and:

Datalogging Made Easy, which should get you started on the right track:

<http://www.monarchinstrument.com/KB/DataLoggers/Track-It/DataLoggingMadeEasy.pdf>

Monarch Instrument, Track-It™ Pressure Dataloggers, whether without a display or with a display are available as either absolute or gauge pressure units. The question of absolute vs. gauge pressure units does come up often enough to offer a brief explanation.

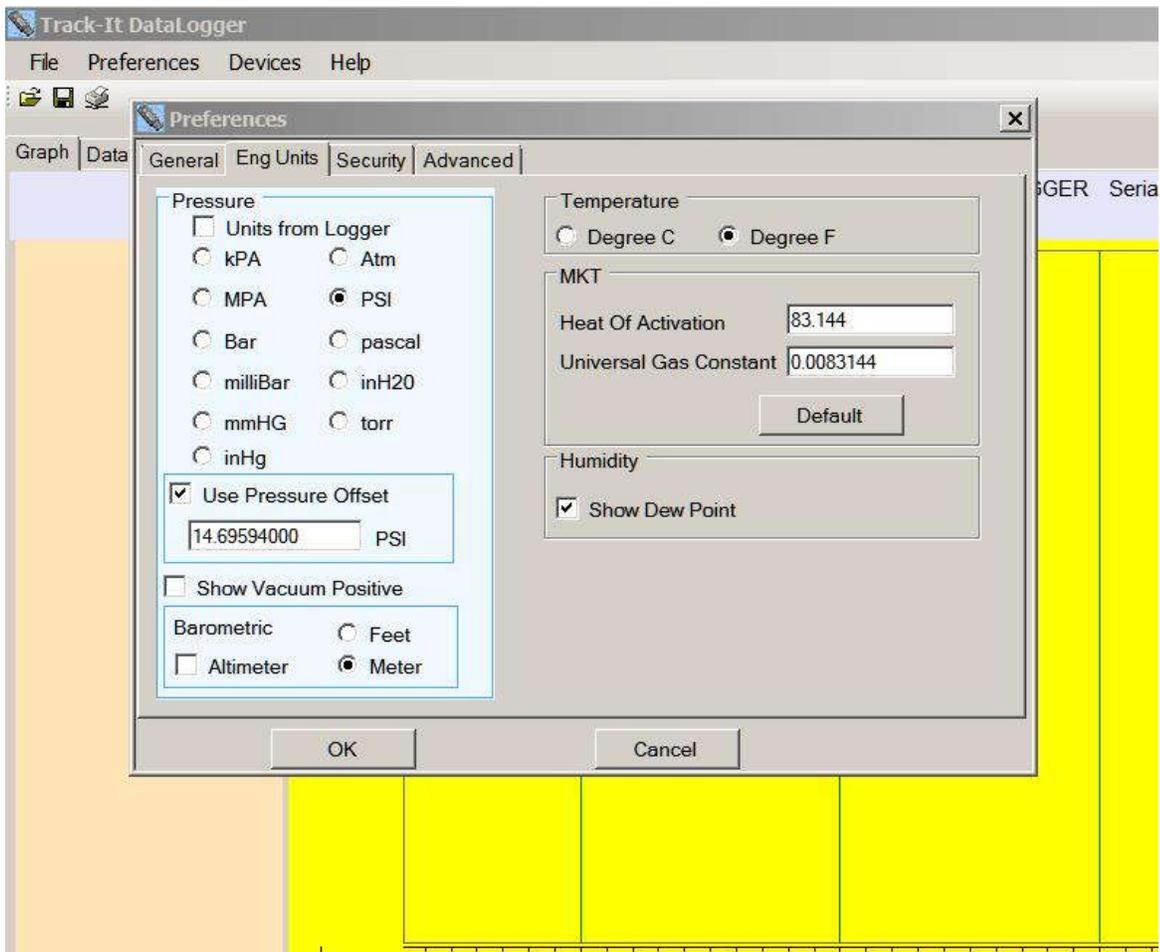
When the pressure port is open to atmosphere, an absolute unit will read atmospheric pressure of about 14.7 psia at sea level (the atmospheric pressure will have slight variations due to weather and altitude).

On the other hand, a gauge pressure unit, when open to atmosphere will read “0” just like a normal water pressure gauge.

In any case, we can compensate for atmospheric pressure by applying an offset.

In the Track-It™ Software, Select Preferences > Eng Units. You will see “Use Pressure Offset”:





Select whatever units you want. Check the box for using pressure offset, and type in the local atmospheric pressure at this time. (default is the average sea level atmospheric pressure of 14.696), then hit OK. (If you use something like Wundermap, you can usually find a reporting weather station near you at a similar altitude.)

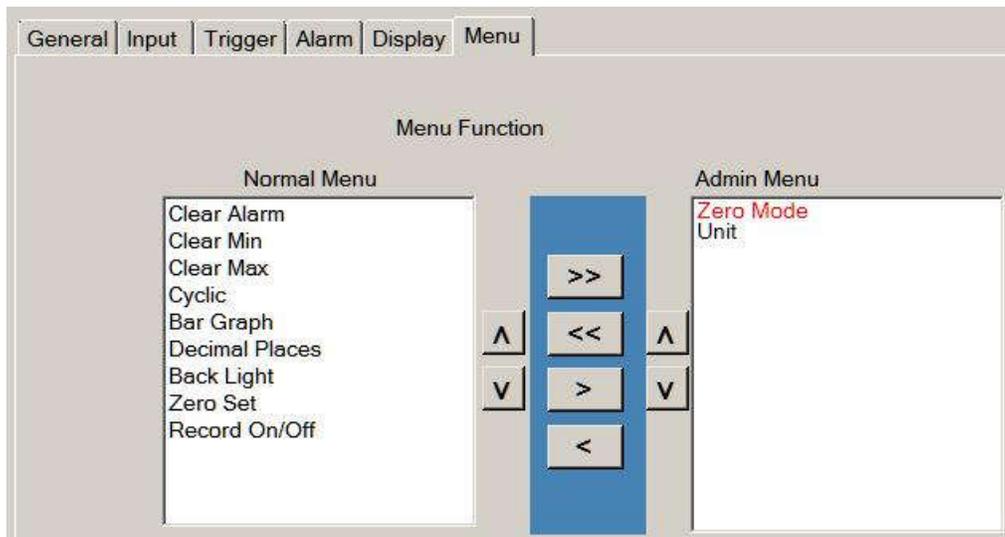
After doing this, your Data Table and Graph in the Track-It™ Software will be corrected for this offset and show zero, or very close to zero when open to the atmosphere.

The above applies to a Pressure Logger without a digital display as well as with the Digital Display Pressure Logger that looks like a gauge with a blue bezel.

For absolute pressure loggers with a digital display, there is an additional step to Zero the actual display if needed. (not entirely necessary as data retrieved is offset in the Graph and Data Table as described above, when we set the offset in preferences.)

On an absolute digital display pressure logger, it will still show 14.7 psia when open to atmosphere. You can enable the setting of the display to read zero as follows.

On the device setup:



Notice that “Zero Mode” is under the Admin Menu side. Zero Mode must be enabled for the Zero set to work.

Since it is under the Admin Menu; it is changed in the Admin mode by pressing and holding the left button while pressing the menu button (center) briefly. The center button will then cycle through the choices until you see the word Zero with either “off” or “Enab” above it. Use the right button to toggle between the two. “Enab” must be above the word Zero for the display to be “zeroed”.

Notice that “Zero Set” is under the Normal Menu side;

If you hit the middle button (menu) on the logger repeatedly you will get to the word “set” or “off” above the word zero.

Use the right button to change between the two. You want to see ”set” above the word zero and the display on the unit should read 0.

Notice in the above picture that all those items in the “normal menu” will toggle around as you press the menu button. You can move them over to the Admin Menu side to un-complicate things.

You could move the “Unit” from the Admin side to the Normal side to get the units of measurement to toggle for you.