



Global Water
Instrumentation, Inc.

Addendum: GL400 Datalogger & WL15 Water Level Logger Calibrating the Bar Graph to Higher or Lower range

With some sensors it is either impractical or unfeasible to reach the full-scale or lower scale of its range. This will not affect the actual reading of the Logger but it will cause the bar graph to work incorrectly.

Here are the equations for finding new limits on the bar graph. First take the two coordinates that were found during calibration: (These numbers can be found in the “Setup” section of the Global Logger Software.)

(High EU _____, High Raw _____) and
(Low EU _____, Low Raw _____).

Now calculate the slope using this equation:

$$m = (\text{High Raw} - \text{Low Raw}) / (\text{High EU} - \text{Low EU})$$

Next find the y-intercept:

$$b = \text{High Raw} - (m * \text{High EU})$$

Now you can calculate the new “Raw” value for any Engineering Unit.

$$\text{New Raw} = (m * \text{New EU}) + b$$

Finally, enter these new “Raw” values into your datalogger and verify the readings are correct.