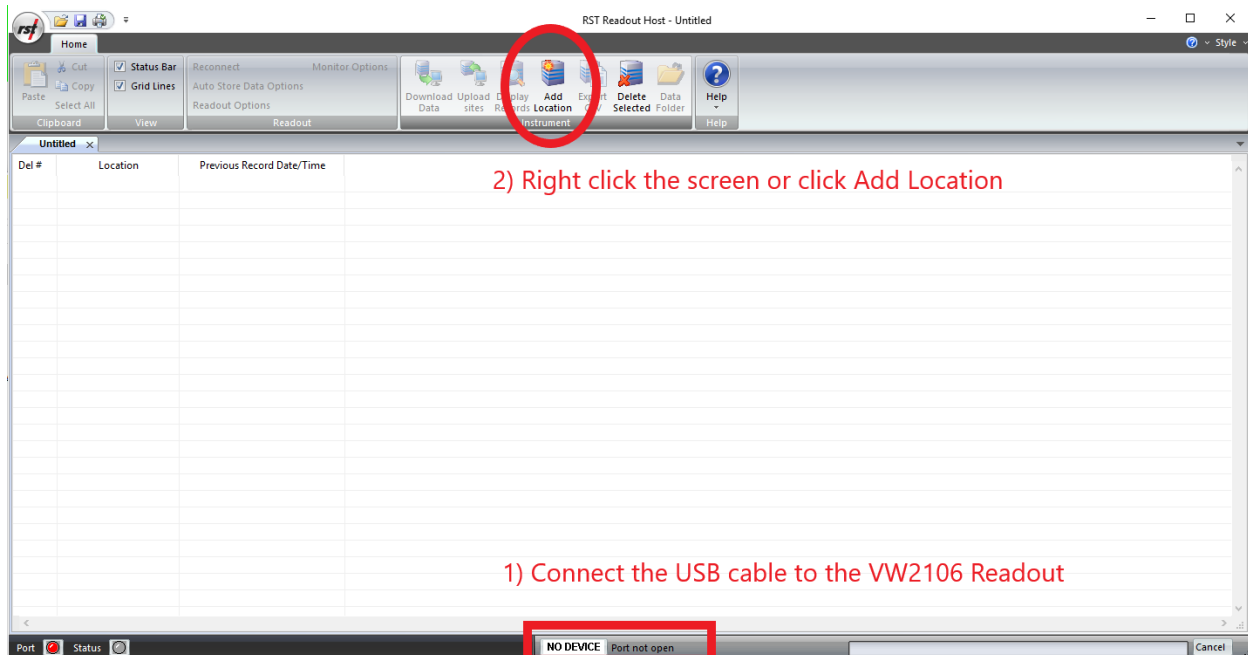


VW2106 – RST Readout Host Setup with Piezo

Start by downloading and installing RST Readout Host from the RST website.

Once installed, connect the VW2106 Readout to the computer with the USB cable provided with the readout.

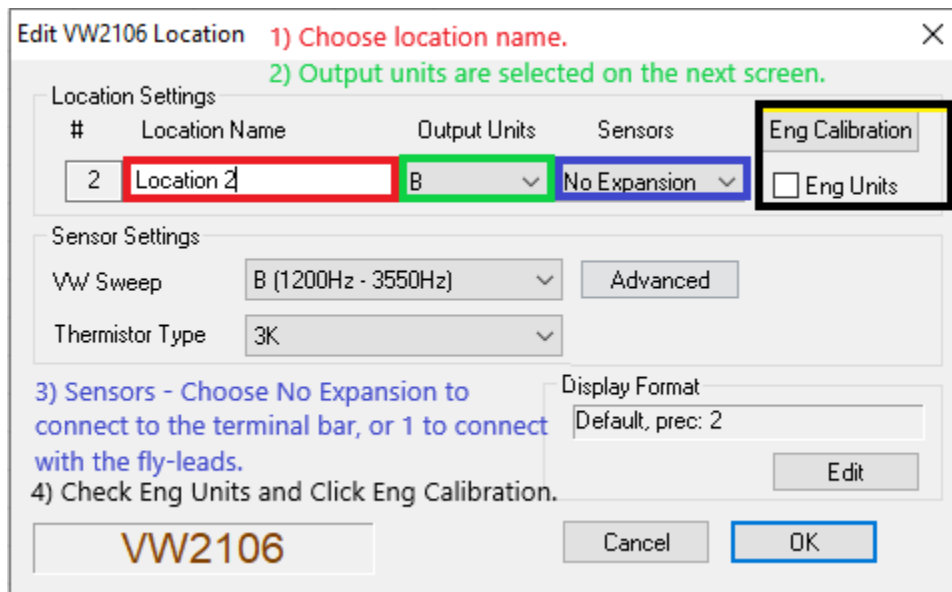
Make sure the Port and Status light are green, either right click the screen or click on 'Add Location'.



Once the first screen comes up, give it a location name. If connecting via the Terminal block, choose 'No Expansion'. If connecting using the fly-lead set to the Expansion Connector, click '1'.

Check 'Eng Units' and click 'Eng Calibration'.

By default, the Output Units will be in 'B Units', this is changed on the next screen.



VW2106 – RST Readout Host Setup with Piezo

You will need a copy of your Calibration Record and the Initial Readings before the piezometer was installed.

Linear Calibration Factor: CF = 9.2982E-02 kPa/B unit
Temperature Correction Factor: Tk = 2.4222E-01 kPa/°C rise

Polynomial Gage Factors:

A = 1.7115E-07 kPa/(B unit)² B = -9.5252E-02 kPa/B unit C = _____ kPa

Pressure is calculated with the following equations:

Linear: $P = CF(L_0 - L) - Tk(T_0 - T) + (S_0 - S)$

Polynomial: $P = A(L^2) + B(L) + C - Tk(T_0 - T) + (S_0 - S)$

Users must establish site zero readings for calculation purposes

Polynomial C = $- [A(L_0^2) + B(L_0)]$

Select the Conversion Method you wish to use, for this, I have selected the Linear Conversion.

Input the CF and Initial B unit reading before installation.

Input the Tk and the Initial temperature before the piezometer was installed.

Select the preferred output units and click OK.

VW2106 Eng Calibration Test Piezo

1) Choose the Conversion Method.

☒ Enable Engineering Units

Conversion Method

☒ Linear Conversion

☐ Polynomial Conversion

Linear Conversion

Calibration Factor G: 0.092982

Zero Reading Ro: 9166

$G \times (R_0 - R) + K \times (T - T_0)$

2) Input Calibration Factor and Initial Zero Reading from Calibration Record.

Polynomial Conversion

Coefficient A: 0

Coefficient B: -1

Coefficient C: 0

$A \times R^2 + B \times R + C + K \times (T - T_0)$

3) Input the Temp Cal Factor from the Cal Record and Initial Temp Reading.

☒ Temperature Correction

Temperature Calibration Factor K: 0.24222 /°C

Initial Temperature To: 23 °C

4) Choose the preferred unit to be displayed on the Readout.

☒ Units Conversion

Units Type: Pressure

Input Units: kPa

Output Units: kPa

Output Zero: 0 kPa

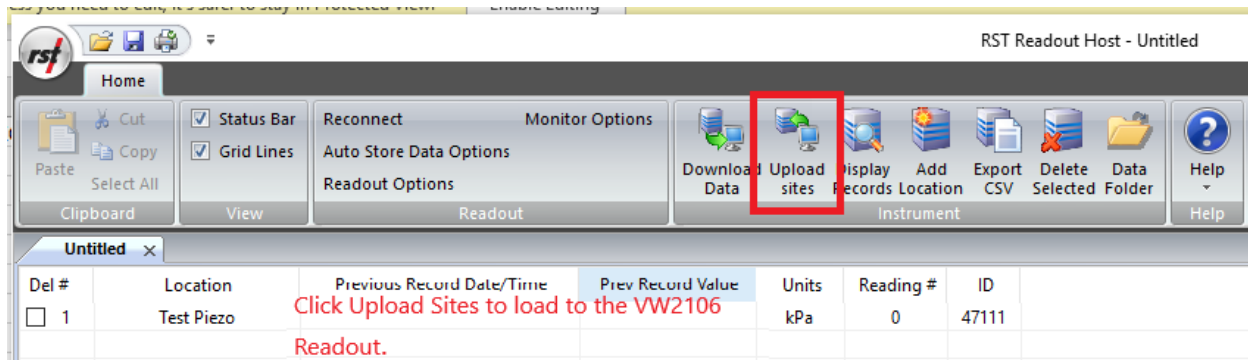
Cancel OK

Screen 1 will come up again with the Output Units selected as on Page 1.

Click OK and the Readout Host screen will come up again with the location displayed.

The location still has to be uploaded to the VW2106 Readout. Click 'Upload Sites' to upload and watch the Status bar at the bottom to ensure that the file is 'Written' to the readout. (see Page 3).

VW2106 – RST Readout Host Setup with Piezo



Once the file is written to the readout, unplug the USB cable and scroll down with the arrows to get to the screen where the B Units and Temperature will still be displayed.

It is possible to have 254 Locations programmed into a VW2106 Readout. If you have multiple piezometers you wish to measure, create a separate site for each one and upload the the VW2106 Readout.



Use the arrows to scroll through the menu to “Monitor Settings’ and Press the enter key. Choose 1) Import from Location.

VW2106 – RST Readout Host Setup with Piezo

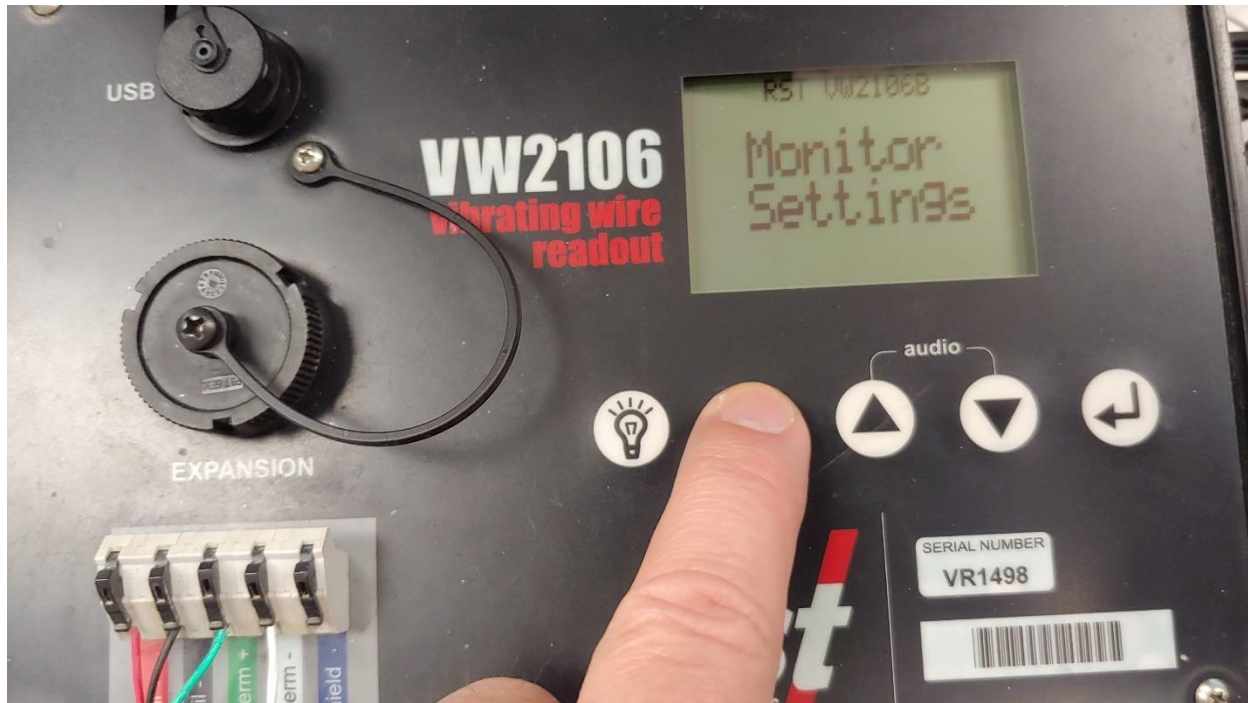


If there are multiple locations, scroll down to the one you wish to monitor.

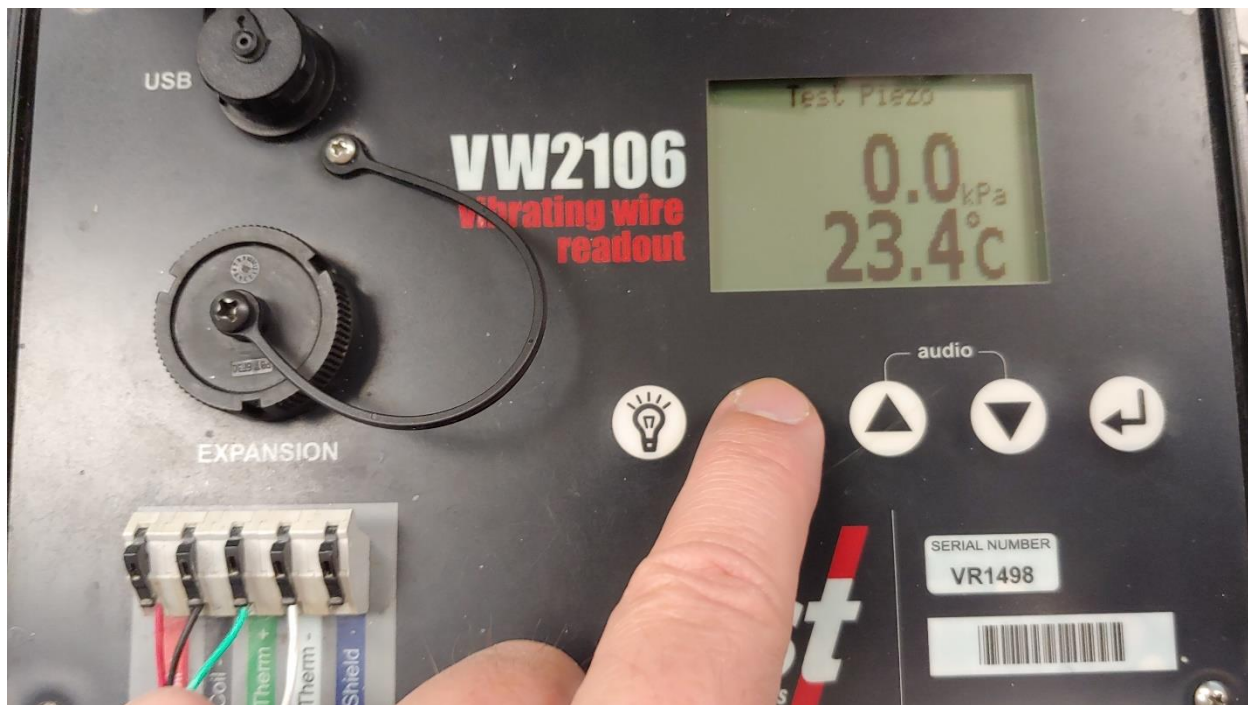


Once you have selected the location with the enter key, the 'Monitor Settings' screen will come up again. Press ESC to go back to the pressure and temperature readings.

VW2106 – RST Readout Host Setup with Piezo



In the case below, the Initial B Unit readings recorded in the location were the same as those measured at atmospheric.



Repeat this process for each of the locations to be created in the VW2106 Readout.