

## How Do I Use the Time Series Chart Type in Insite? Frequently Asked Question #13

### Overview

The Time Series chart type is designed to allow creation of a chart that represents on one axis fixed intervals, i.e. the distance of instruments along the crest of a dam, on the other axis, an average representation of the readings of these same instruments over a given period of time, i.e. a weekly or monthly average.

### Configuration

There are essentially 4 steps to the configuration of this chart type:

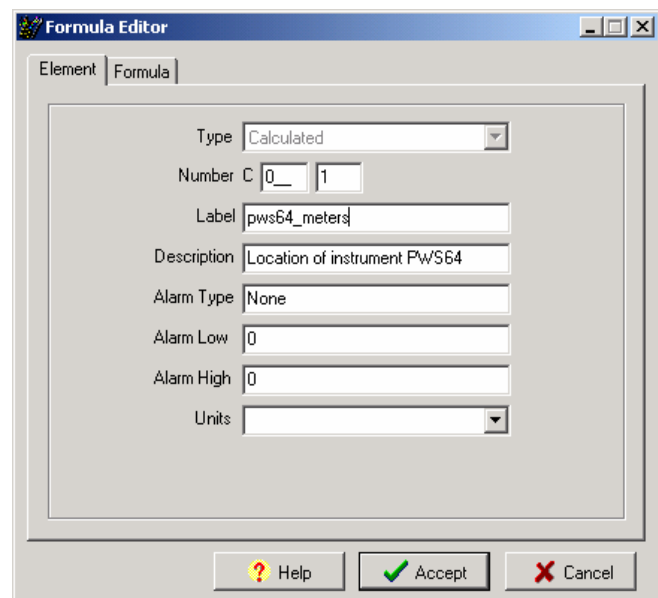
- Create the **Calculated Elements** which will represent the distances or other reference values for each of the instruments.
- Configure the Time Series Type of the **Configure | Quick Chart** form, and other options.
- Configure, using the **Configure | Element Groups** the Groups to be used in the creation of the chart.
- Configure, using the **Configure | Default Selections** form, the period of time over which the instruments readings will be averaged.

Optionally this configuration may be saved for easy retrieval at a future time.

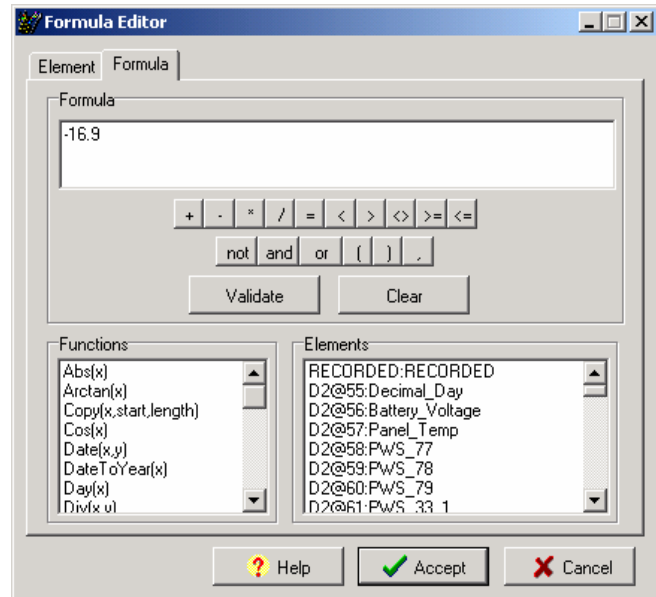
### Configure Calculated Elements

The Calculated Elements represent the distances or other reference values to be used in charting the instrument averages. There is no limit to the number of values you may create. You will need Design Mode access to the database to create and/or modify these Calculated Elements!

- Select **File | Design Mode**, enter the Design Mode password.
- Select **Design | Elements Configuration**. This will display the list of available Data and Calculated Elements that are stored in the database.
- Select **New**, the **Formula Editor** will display, select **Calculated** from the Type drop-down list. After selecting Calculated you will see the Formula tab display, see the screenshot.

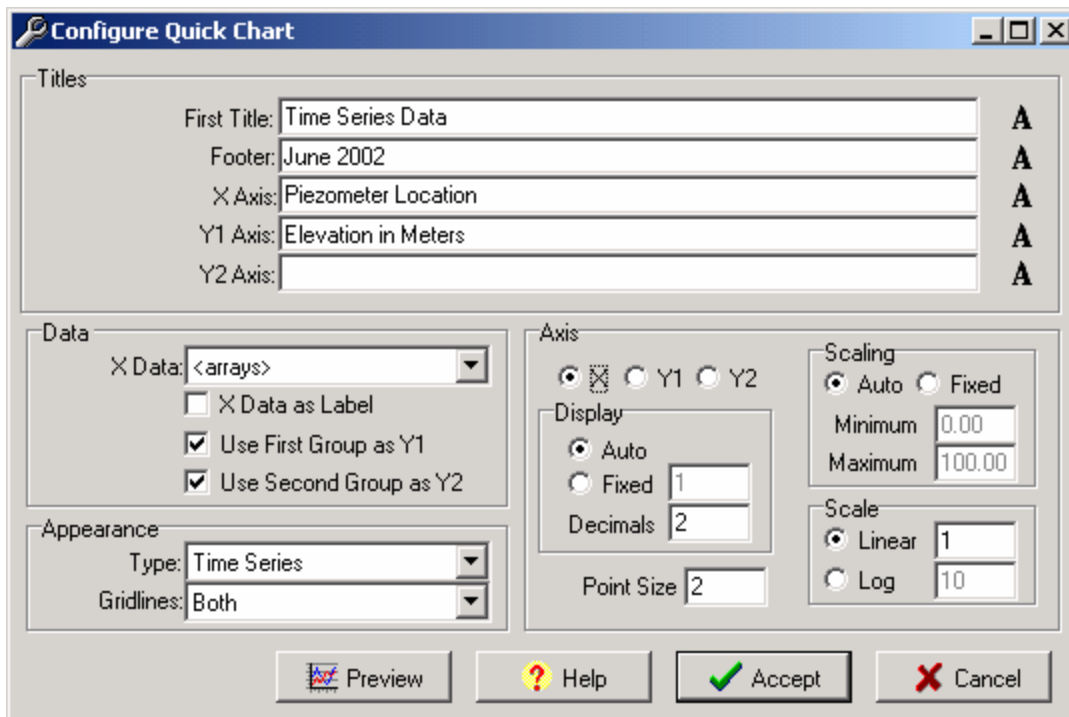


- Enter an appropriate **Label**, and **Description** if desired. Use a label name that helps identify the instrument it is associated with, the example shown previously uses PWS64 which is the instrument it is associated with, meters describes the units.
- Select the **Formula** tab at the top, enter the position value for this instrument, an example of which is shown.
- Press Accept to accept the new Calculated Element.
- The Configure Elements form will display, select New for all additional instrument location elements that need to be created.
- After creating the necessary elements, click **Save** to save these elements to the database. Click **Close** after the changes have been saved to close the Configure Elements form. Select **File | Design Mode** to exit Design Mode.



### Configure the Time Series Type

The Time Series chart type is selected from the **Type** pull-down menu of the **Configure | Quick Chart** menu, as shown below. Other options, such as chart titles and format have also been configured.

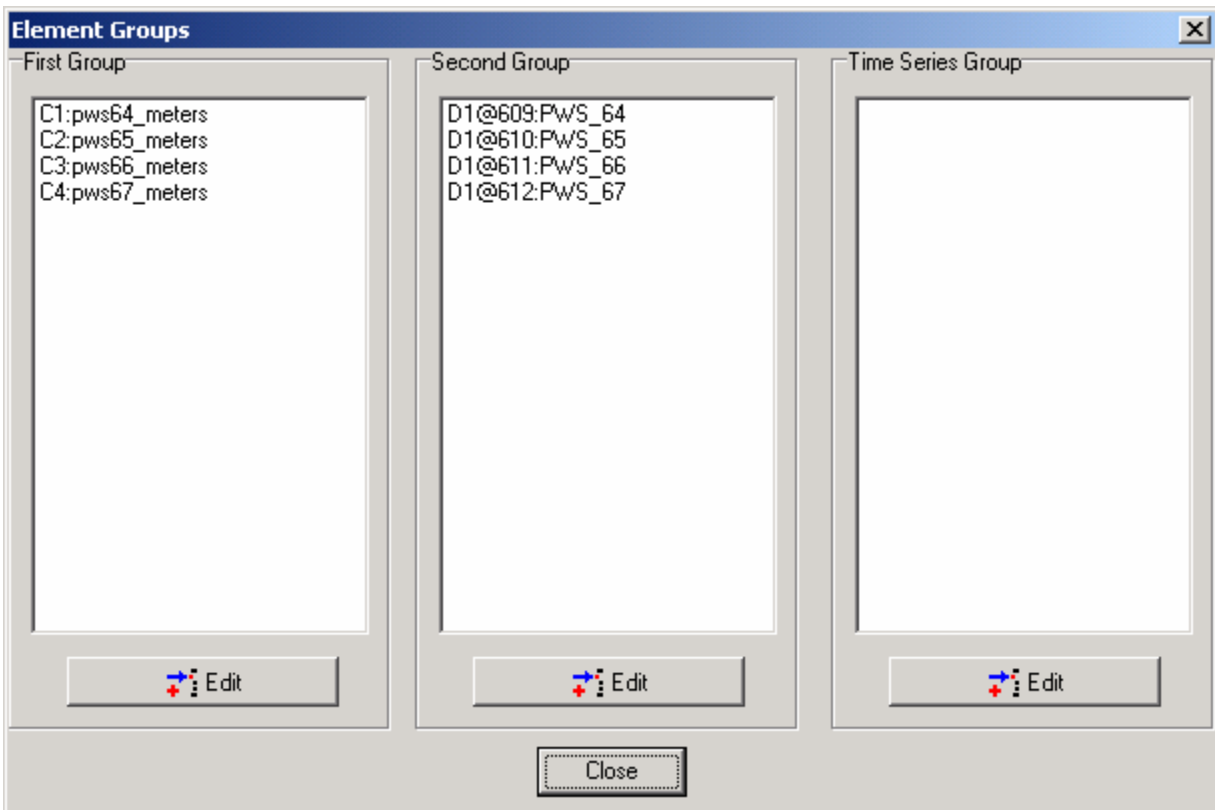


## Configure Element Groups

The Groups, which are used to determine what values are plotted on which axis of the Quick Chart, must be configured. One group, usually the **First Group**, is configured to include the position or reference values as stored by the Calculated Elements that have been created, the **Second Group** is usually used to hold the corresponding instruments.

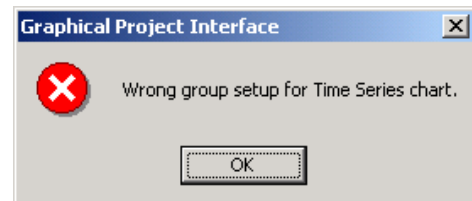
The First Group represents the source for the X axis data for the chart, the Second Group represents the Y1 axis data source.

Select **Configure | Element Groups** to display the Element Groups form, as shown below with the example configuration.



Click **Edit** to display a list of available Data and Calculated Elements from the database, scroll to the bottom for the Calculated Elements.

**Note: The number of reference, or Calculated Elements, must match the number of Data Elements or the following error will display when attempting to create the chart!**



## Configure Default Selections

The last configuration step involves specifying what time period (or other criteria) will be used for the calculation of the average values to be plotted. Typically data are plotted for a given week or month.

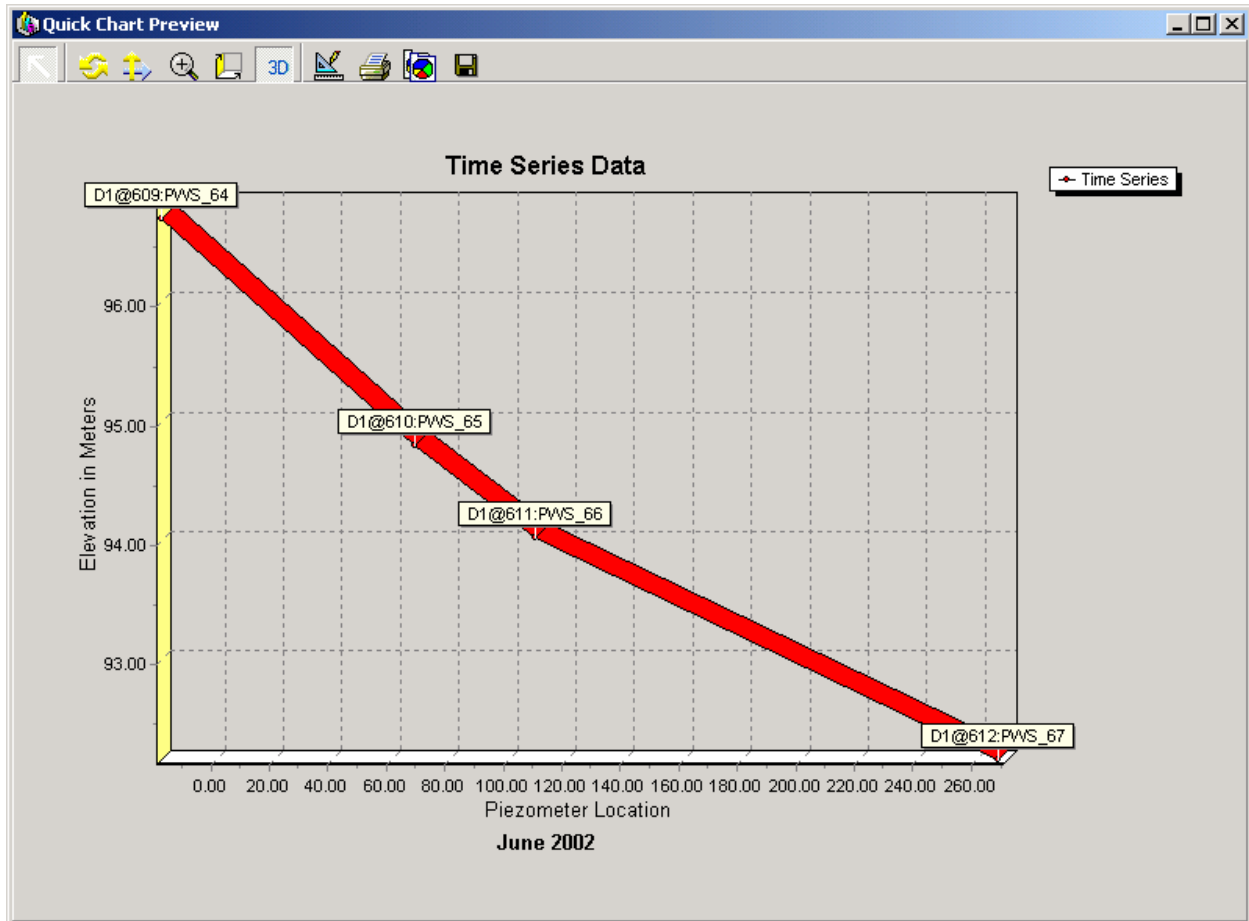
Select **Configure | Default Selections** to display the Default Selections form. The example illustrates selecting all the data for the month of June 2002.

Use the **Custom Time** option to select and/or enter a **From** and **To** date for the data selection. All of the data points for the Data Elements selected in this time period will be selected from the database, averaged and then plotted against its corresponding reference value, as derived from the Calculated Element.

The dialog box is titled "Configure Default Selections". It contains several sections:

- Selection Criteria:** Includes radio buttons for "Last" (set to "Day"), "Custom Time", and "Advanced". Under "Custom Time", there are "From:" and "To:" date pickers set to "6/1/2002" and "6/30/2002" respectively. There are also "Start", "Stop", and "Copy" buttons.
- Quick Select Last:** A spinner box set to "1" and a label "Value(s)".
- Data Destination:** Radio buttons for "Quick Report", "Quick Chart" (selected), and "Spreadsheet".
- Date Time Format:** Two dropdown menus for "Date" and "Time", both set to "Default".
- Buttons:** "GO!" (with a red flag icon), "Help" (with a question mark icon), "Accept" (with a green checkmark icon), and "Cancel" (with a red X icon).

Press the **GO!** button to generate the chart, as shown below.



Optionally this configuration may be saved, use **File | Save As...** to save as a parameter file.