Viewing Fluke DAQ CSV data files while logging

Application Note

Being able to see data logging results while a data logging session is in progress can be valuable to many users. This application note describes how to import and regularly update CSV data from the parent data logging CSV file to a new spreadsheet that can be monitored and manipulated as your data is being collected.

Directly opening a data CSV file

As a default setting, Fluke DAQ 6.0 and above creates a CSV file in the User Public folder on Windows 7, under the file name of the current configuration file. This file is easily opened using an Excel® spreadsheet. For example, when Excel is installed on the computer, simply double-click on the CSV file to open it, or open it from within Excel by selecting the File Open menu and set File type to Text Files to find and open your CSV data file produced by Fluke DAQ.

One of the main disadvantages to this direct opening method is that once a CSV file is opened in this way, Excel "freezes" the data file and does not show any subsequent updates to the Fluke DAQ data file. This means that if the Fluke DAQ software adds data to the CSV file, the additional data are not visible until the file is closed and then opened again. In addition, if the file is not opened in a "read only" mode and is opened when Fluke DAQ is attempting to write data to the file, data loss or corruption would probably result.

These two direct methods of opening and closing CSV data files are not convenient when there is a frequent need to review your data during a recording session. Luckily a more automated method exists within Excel to allow "near" real-time updating and viewing your data.

Automated updating using the Excel Data Import feature

There is a 'Data Import' feature included in Excel software that allows the automatic update from a source file to a new CSV file of your choosing. While this Data Import takes a few steps to set up, it does enable Excel to update a new file that mirrors the original data file while Fluke DAQ logging is in process.
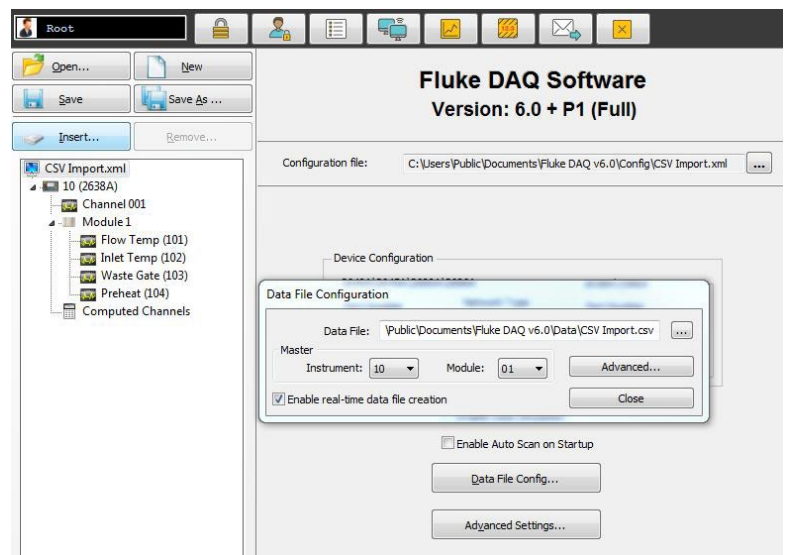

Figure 1. Default file location C:\Users\Public\Documents\Fluke DAQ v6.0\Data

Figure 1. 2638A logging and updating CSV and Import files

Instructions for setting up automated Data Import using Excel

Begin by opening a new Excel worksheet:
1. Under the "Data" menu, select the **Import External Data** sub-menu, then **From Text.**
2. Use the Select Data Source window to navigate to the Fluke DAQ CSV data file you wish to import data from, select it and press **Import.**
3. This brings up the Import Text Wizard. Select **Delimited file** type, and press **Next.**
4. In the Step 2 of 3 window under **Delimiters,** check **Comma,** uncheck **TAB,** then press **Finish.**
5. An Import Data window appears: select **Existing Worksheet,** and select the **default cell location of A1.** Now select **Properties** and make the selections as shown in figure 2 then click **OK.**

Formatting date and time in Excel

Fluke DAQ reports time to the data file in the standard format referred to as Serial Date-Time. This time information is recorded in the numeric format XXXX.XXXXX. As a very basic overview, the integer portion of this number represents the number of days from 1900–Jan–0. The fractional portion represents the fractional time of a 24-hour day.

You will need to format the first column of your new CSV import data file in Excel to display the date and time in your preferred format. To do this, select the "time" cells usually displayed in column "A" of your new file. To select the entire "A" column, simply click the top level column header "A," right-click and select **format cells.**
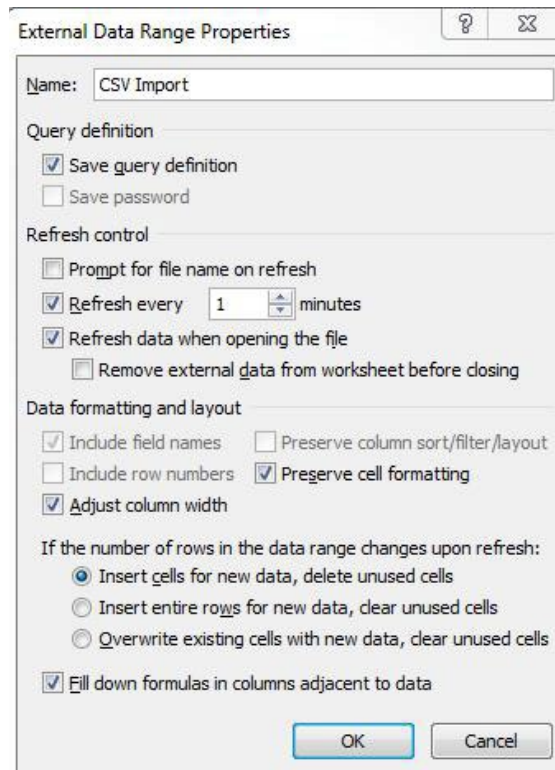

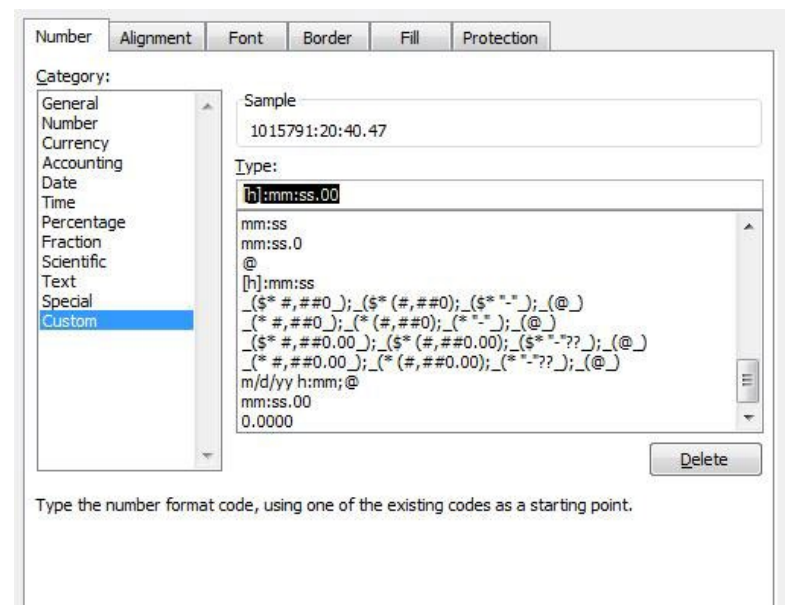**Figure 2.** Properties selections

Figure 3. Entering custom time formats in Excel

Now under the Format menu, select the **Number tab** and choose the **Date** or **Time** format that you prefer. Standard formats under these menu selections are available to display time down to the second such as "m/d/yy h:mm:ss." If you need more resolution for the time, such as to a tenth of a second or milliseconds, choose the **Custom** number format and enter a suitable format string in the **Type** field and select **OK**. For example, the following format: "m/d/yy h:mm:ss.000" or "yyyy/m/d h:mm:ss.000" If the first column now shows all "#" signs, change the column's width to display the date and time correctly.

Benefits of your new import spreadsheet

Now that you have the Fluke DAQ parent CSV file data automatically importing in to your new spreadsheet at one–minute intervals, you can add any formulas you need to calculate related parameters. For example, by entering formulas into adjacent cells and copying these formulas through the entire column, you can view results such as heat dissipation rate, heat saturation, power, torque, etc. Your results will calculate as soon as newly imported data are loaded into your new spreadsheet. This can save valuable post processing time and display real time results that are immediately meaningful to your operation. You can also chart and graph results as they update every import cycle.
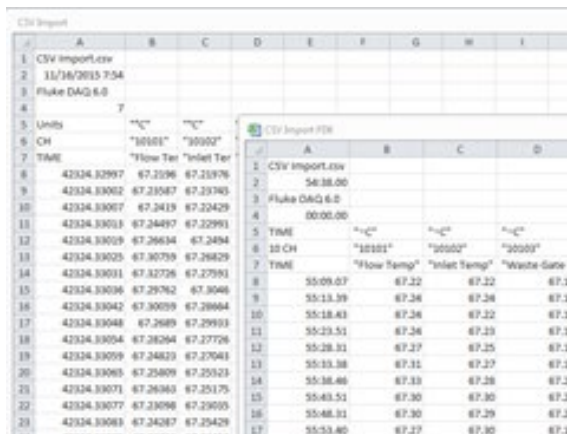

Figure 4. Fluke DAQ CSV source file and new import file with formatting
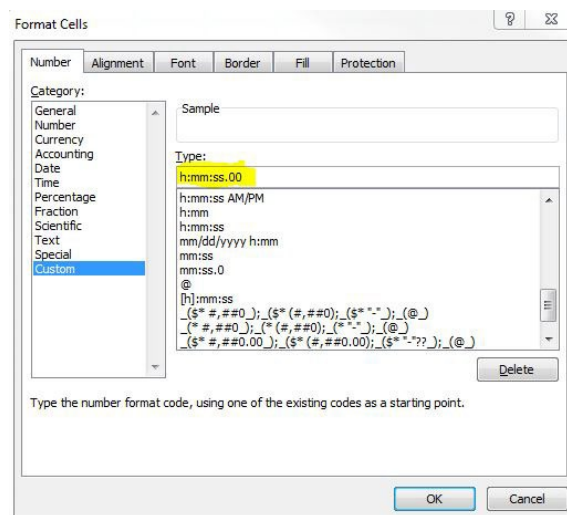

Figure 5. Custom time settings