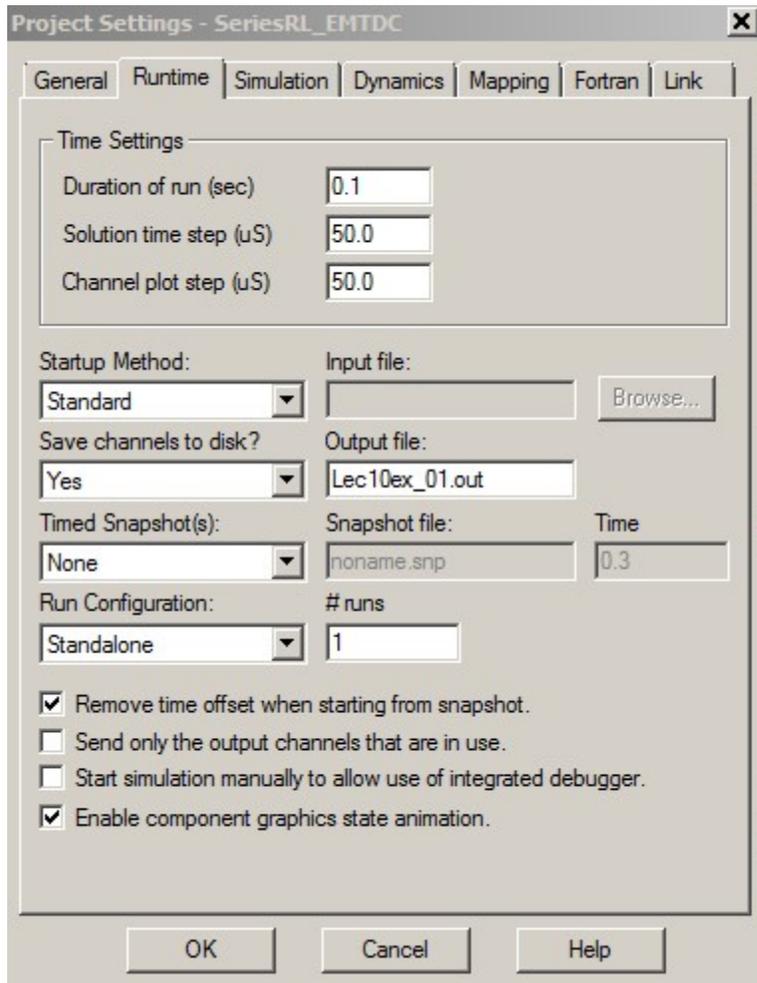


Importing Plot Data from PSCAD, ATP and EMTP-RV to MathCAD

PSCAD:

- Need to set to export output data in case settings:



PSCADout :=
C:\Lec10ex_01.out

$t := \text{PSCADout}^{\langle 0 \rangle}$

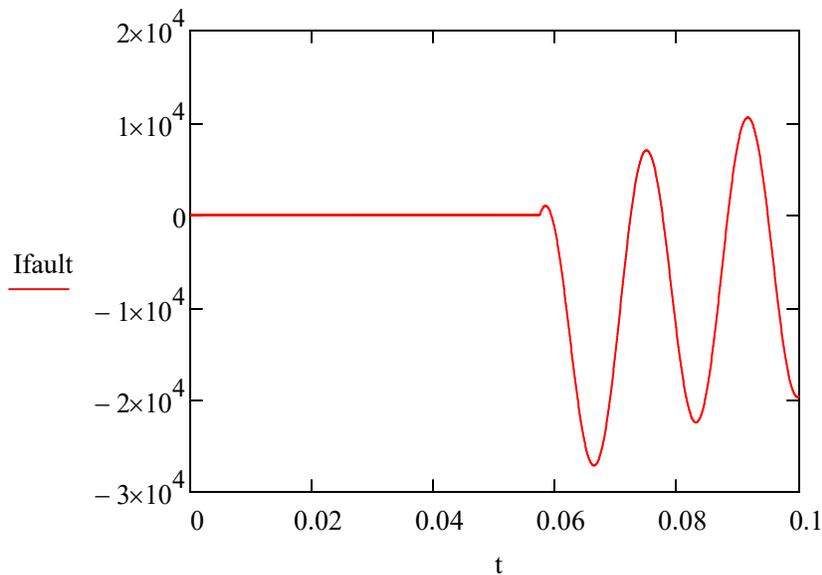
- Note that the factor of 1000 is missing, so I added kV and kA

$V_s := \text{PSCADout}^{\langle 1 \rangle} \cdot \text{kV}$

$\max(V_s) = 28.17 \cdot \text{kV}$

$I_{\text{fault}} := \text{PSCADout}^{\langle 2 \rangle} \cdot \text{kA}$

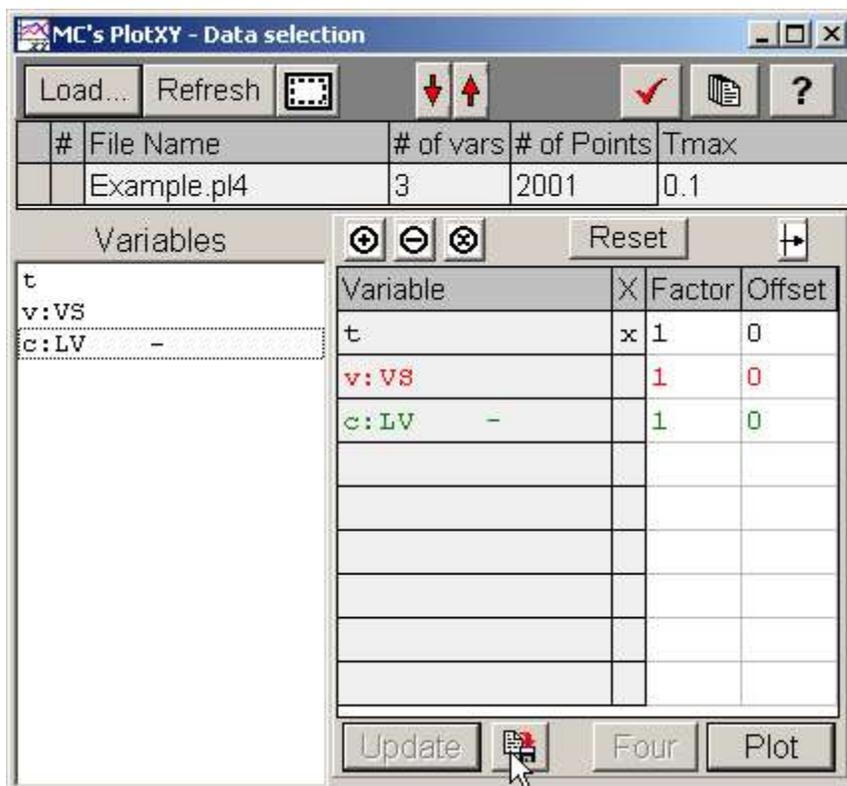
$\min(I_{\text{fault}}) = -27.15 \cdot \text{kA}$



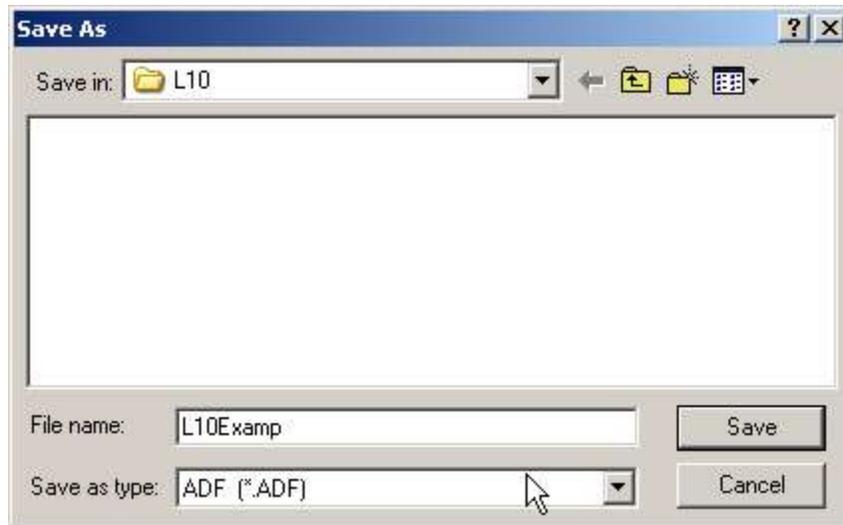
You need to know what the specific columns represent from when you created the file or look at the *.inf file associated with the file you saved to disk.

Importing Plot Data from ATP:

Several methods. Most straightforward is probably to use PlotXY to export data. You control which variables and the order.

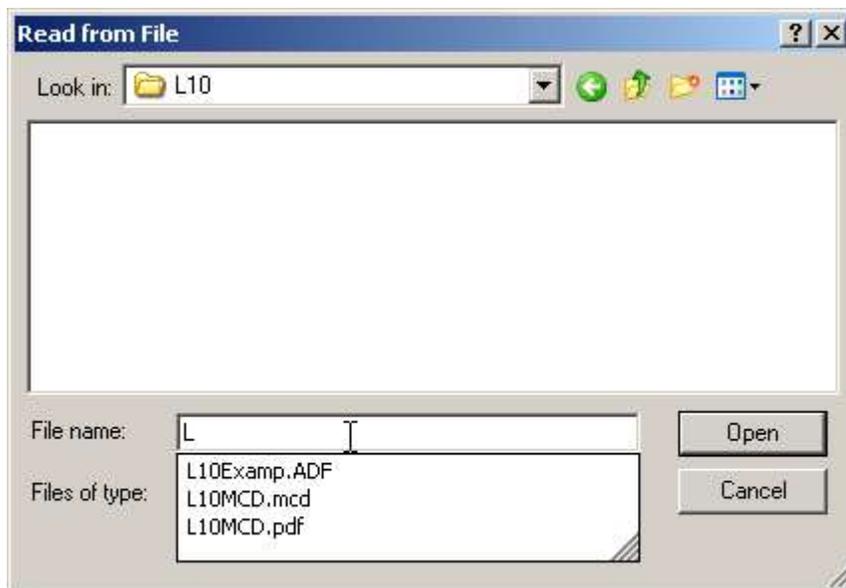


Click on the save to floppy icon. Only the variables selected to plot will be saved to the file.



Can choose file type, *.ADF works best here.

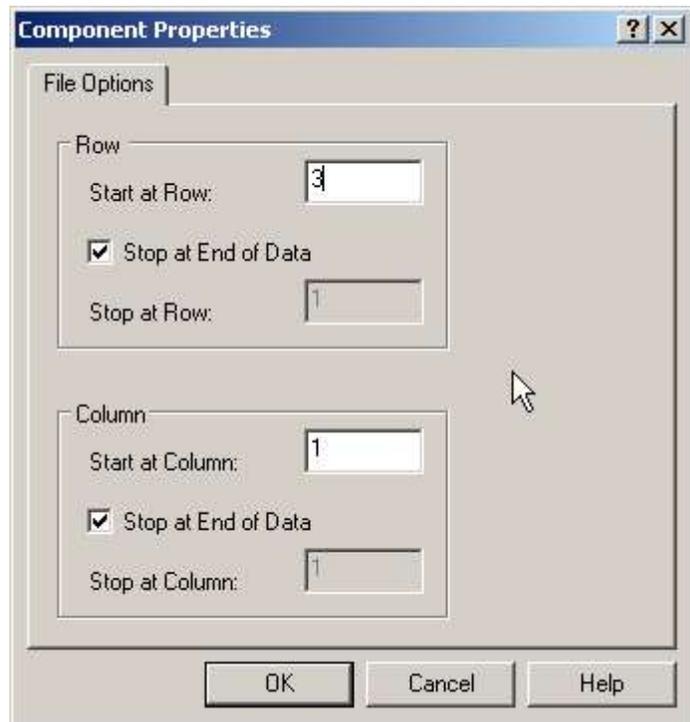
Note that the extension *.ADF is not normally associated with a text file. But if you start to type the file name you get a pulldown menu for the files in that directory:



ATPimport :=

...\L10Examp.ADF

Now there are two header lines that we need to clean up before we can use the numbers. You need to select the properties for the data import (right click and choose properties (this will come up automatically in Mathcad 13 or higher as part of the import). Tell it to start at row 3.

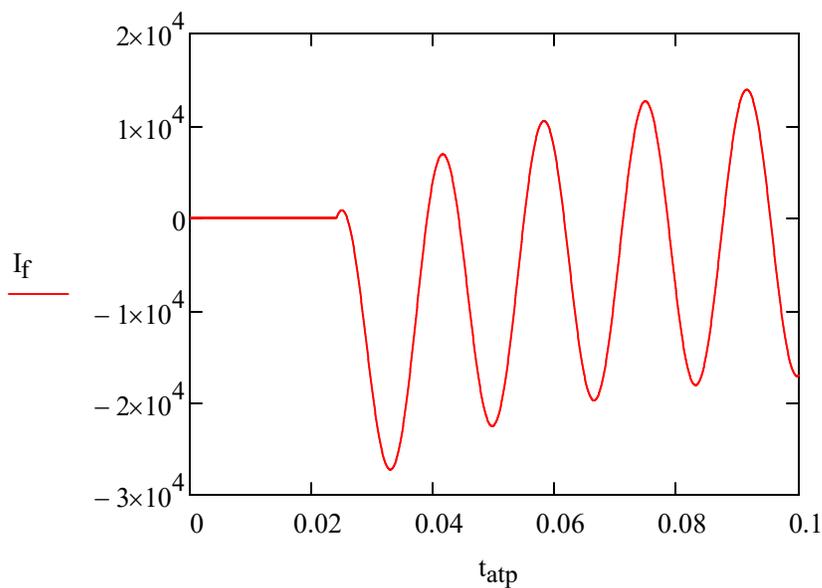


$$t_{atp} := \text{ATPimport}^{\langle 0 \rangle}$$

$$V_S := \text{ATPimport}^{\langle 1 \rangle} \quad \max(V_S \cdot V) = 28.17 \cdot \text{kV}$$

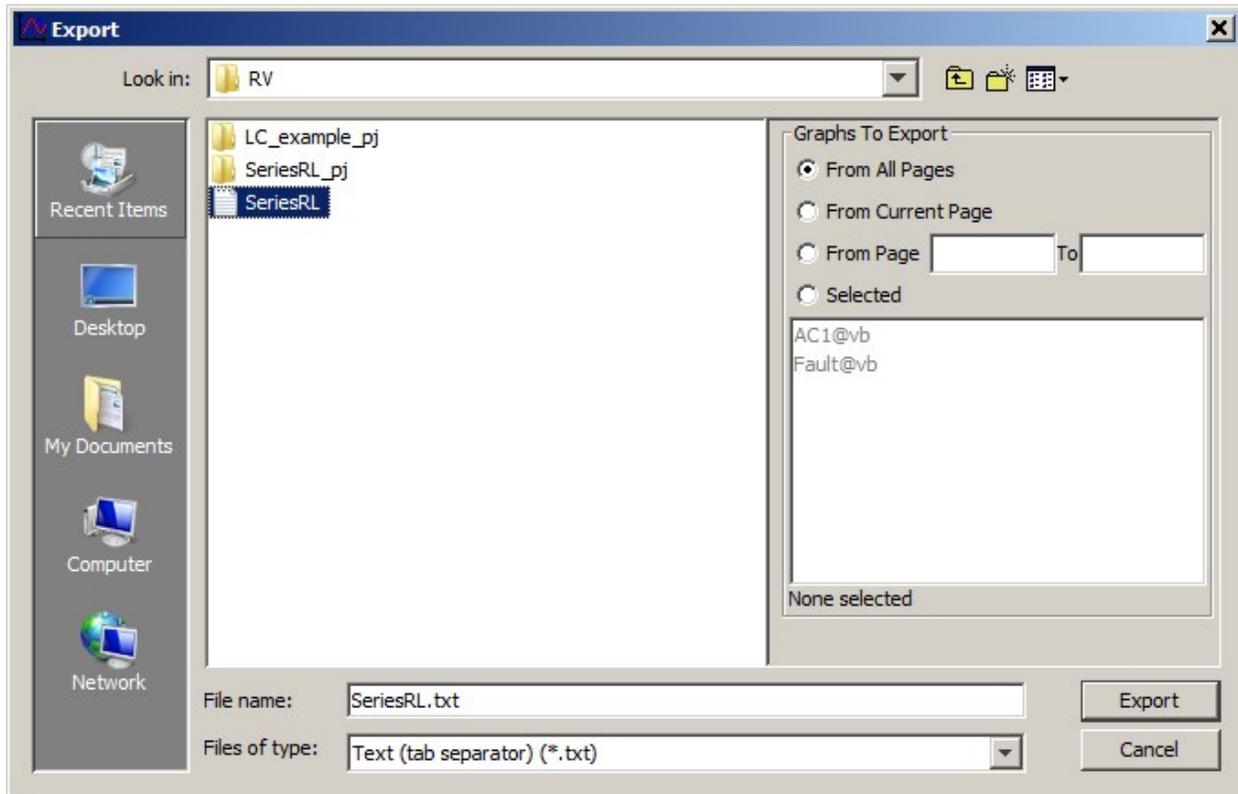
$$I_f := \text{ATPimport}^{\langle 2 \rangle} \quad \min(I_f \cdot A) = -27273.9 \text{ A} \quad \text{Note that this has the thousands term}$$

You either need to know what the specific columns represent from when you created the file or look back at the first two lines of the file that you are ignoring.



EMTP-RV

- Export from plotting program Scopeview



EMTP_RV_import1 :=

... \SeriesRL.txt

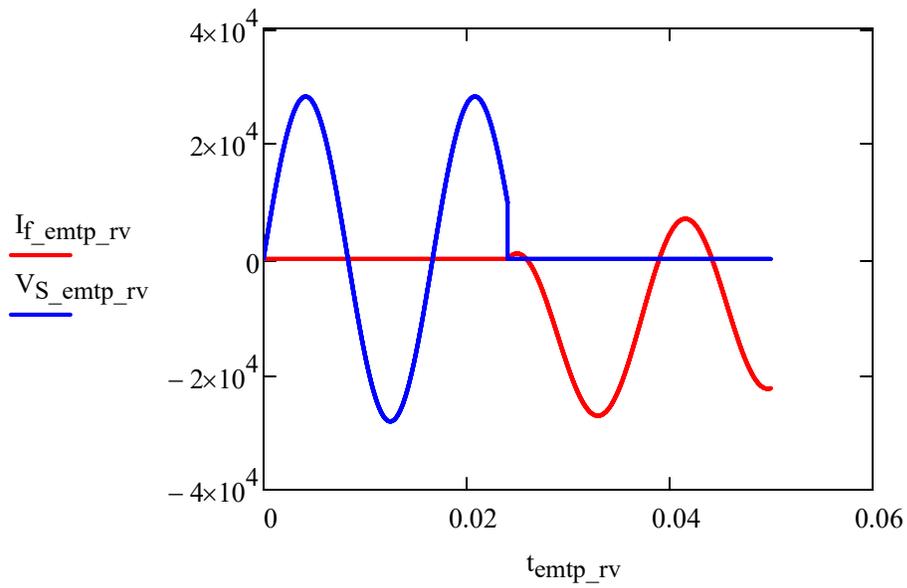
Note that the first two lines of the *.txt file needs to be skipped in this case as well.

$t_{\text{empt_rv}} := \text{EMTP_RV_import1}^{\langle 0 \rangle}$

$V_{S_empt_rv} := \text{EMTP_RV_import1}^{\langle 1 \rangle} \quad \max(V_{S_empt_rv} \cdot V) = 28.17 \cdot \text{kV}$

$I_{f_empt_rv} := \text{EMTP_RV_import1}^{\langle 2 \rangle} \quad \min(I_{f_empt_rv} \cdot A) = -27191.57 \text{ A}$

Note that this has the thousands term



For Matlab users:

- The *.out files from EMTDC can be imported into Matlab if you add:
x = [
before the first line and
]; at the end
then you can grab individual columns
- You can do similar with the *.ADF files from ATP.
- You can also use PL42MAT with ATPdraw
- Scopeview can also export to MAT format