

Configuration options for the SIMFIT and SIMDEM packages

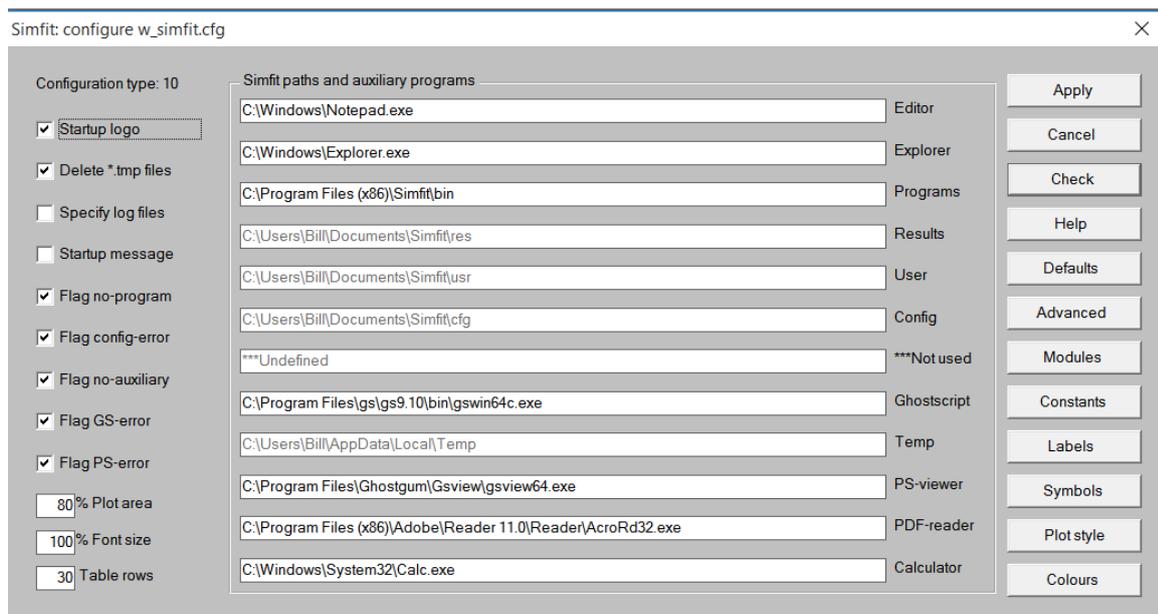
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1 The SIMFIT configuration control

The 32-bit and 64-bit versions of SIMFIT and SIMDEM do not use the registry. Instead they share the same set of configuration files stored in the `... \Documents \Simfit \cfg` folder. None of these configuration files are essential, but some do store cumulative information that will be lost on deletion. If any configuration file becomes corrupted it can be deleted at any time and a new default one will be created. For this reason the configuration files must not be given the read-only attribute.

Configuration changes are made from the SIMFIT configuration control which will be as follows when invoked, except that the paths and options selected will be for your PC.



Note that, after performing any alterations to the current SIMFIT or SIMDEM configuration, you must press the [Check] button to check the current settings, then the [Apply] button to write changes to the main configuration file `w_simfit.cfg`. If errors are found, such as missing executables, you will be given the opportunity to search for these.

1.1 Differences between the 32-bit and 64-bit packages

1. The 32-bit versions will run on either 32-bit or 64-bit operating systems. They will probably be installed in either the `C:\Program Files` folder with 32-bit systems, or the `C:\Program Files (x86)` folder with 64-bit systems.
2. In 32-bit versions of SIMFIT the program manager is `w_simfit.exe` and the individual programs have the `w_` prefix (e.g. `w_simplot.exe`).
3. In 32-bit versions of SIMDEM the program manager is `simdem.exe`.
4. The 64-bit versions will only run on 64-bit operating systems. They will probably be installed in the `C:\Program Files` folder.
5. In 64-bit versions of SIMFIT the program manager is `x64_simfit.exe` and the individual programs have the `x64_` prefix (e.g. `x64_simplot.exe`).
6. In 64-bit versions of SIMDEM the program manager is `x64_simdem.exe`.

1.1.1 Simfit users

The path to the SIMFIT driver (see item 15) must be correct, and the SIMFIT installation tree must be intact, or SIMFIT will not function correctly.

1.1.2 Simdem users

The path to the SIMDEM driver (see item 15) is optional but, if this path is correct and the installation tree is intact, then several further functionalities are available. SIMDEM is a stand-alone library, and items 1 to 9 are not referenced. Where SIMDEM is being used in clusters, or with IDEs like NAG Fortran Builder or Silverfrost Plato, users should be able to download copies of the SIMDEM DLLs if they are not on the path, or this should be done automatically.

1.1.3 Windows users

If you follow the default installation, then SIMFIT will be ready to use after minor interactive editing of the file `w_simfit.cfg` resulting from using the SIMFIT configuration control. You do not need to edit the file `l_simfit.cfg`, but this must have the instruction `0 %windows%` on the first line to cancel all Linux specific actions.

The main configuration file `w_simfit.cfg` will be edited by the SIMFIT configuration control in the `...\Documents\Simfit\cfg` folder.

1.1.4 Linux users

The files `w_simfit.cfg` and `l_simfit.cfg` will be created by SIMFIT as for Windows, and these must be edited by using the [Configure] and [Advanced] buttons. You should switch off option 32 and, note that some items (e.g. 21) are ignored in Linux. For more details read the document `linux.txt`.

1.1.5 Advice

When SIMFIT has been configured so that the paths to all auxiliaries are correct, and there are no missing programs, you should switch off the options to check for missing or incorrectly configured programs. This will considerably speed up the load time and prevent errors created by impatient double clicking of the desktop icon, and thus attempting to initiate multiple instances of the driver involved. This is because the DLLs and auxiliary files supplied with SIMFIT can only be linked singly, and any attempt to run multiple copies of SIMFIT will cause execution errors.

Advanced users who want to speed up data analysis should read about items 4, 5, 6, 7, 8, 31, 32, 33, 34, 35, and 36 and maybe switch them off. This is described more fully in the document `speedup.pdf`.

2 Options defined in `w_simfit.cfg`

There follows a systematic explanation of the options stored in `w_simfit.cfg` resulting from use of the SIMFIT configuration control.

Note that values of 0,1 for false and true are set from the left hand check boxes, character strings are typed in or copied and pasted into the fields on the right hand side, while the [Advanced] button must be used for access to the remaining options.

2.1 Items 1 to 9

These require 0 = false, 1 = true.

Except for option 2 these options are only effective on re-run. These options are not referenced by the SIMDEM package.

Item 1: 0 ... display a minimized and subdued front page
1 ... display a full size front page with SIMFIT logo
The version number follows a % sign as, in 1 % 9.
Start with 1 for a full page display but, if this becomes tiresome, set 0 for a simplified interface.
This option is disabled in Linux.

Item 2: 0 ... save `f$??????` and `f$??????.tmp` files on exit

1 ... delete f\$?????? and f\$?????.tmp files on exit
SIMF_IT creates temporary files with names like
f\$123456.tmp which are not normally of any interest
and should usually be deleted at close-down.
Almost always set 1, except for expert users who want to
inspect and possibly archive data from temporary files.

Item 3: Not used from SIMF_IT version 7.2.2 onwards

Item 4: 0 ... silent start up

1 ... display advisory messages on start up
Set 1 for group use so that everybody gets a chance to
appreciate the SIMF_IT philosophy, but individual users
will read the messages once then set 0 to switch off.
Advanced users should set this to 0.

Item 5: 0 ... no check for missing SIMF_IT files

1 ... display program file missing error messages
The only reason to set 0 is to speed up initialization,
or where users know why certain files are missing.
Advanced users should set this to 0.

Item 6: 0 ... no check for running from the SIMF_IT folder

1 ... flag unsatisfactory SIMF_IT configuration
This should be set to 1 as unpredictable results may occur
when running from outside the SIMF_IT folder. Expert users
with several dedicated versions containing special editions
of some SIMF_IT programs may wish to have one remote driver
to switch between installations, and could try setting 0.
Advanced users should set this to 0.

Item 7: 0 ... no check for missing auxiliaries

1 ... check that user-specified programs exist
Set 1 unless some files have been deleted or not specified
because they are never going to be used.
Advanced users should set this to 0.

Item 8: 0 ... no check that PS-viewer exists

1 ... check that a PS-viewer exists
Misguided users who do not appreciate the power of SIMF_IT
PostScript facilities and are content to just use Windows
graphs (which should always be either svg, png or enhanced
metafiles, emf) may set 0 to switch off PostScript checking.
It is a mistake not to install a PostScript-reader such as
GSview, as this package provides many additional

and powerful graphical procedures to `SIMFIT` users, especially if PostScript printing is not available. Note that, with `GSview` installed, PostScript files can be printed on any printer. Advanced users should set this to 0.

- Item 9: 0 ... no check that the PS-printer driver exists
1 ... check that the PS-printer driver exists
As for Item 8.

2.2 Items 10 to 12

- Item 10: percentage of monitor to be used for plotting
Overflow or small on-screen graphics can be adjusted, but usually a value between 70 and 90 should be satisfactory.
- Item 11: percentage expansion of text and menu fonts
Overflow or small list box or tutorial fonts can be adjusted, but usually a value between 90 and 110 should be satisfactory.
- Item 12: number of lines before table output pauses
With large fonts and/or small displays this will have to be set to 30 or less, but with small fonts and/or large displays 40 or more may be preferred.

2.3 Items 13 to 24

- Item 13: your chosen editor (path/filename)
This would usually be `Notepad.exe` in Windows, but could be `gedit`, `kedit`, `kwrite`, `vi`, `emacs`, etc. in Linux.
- Item 14: your chosen explorer (path/filename)
This could be a disk explorer, an internet explorer, or in fact any other file handler or browser, e.g., in Linux it could be `konqueror` or `nautilus`.
- Item 15: path to the `SIMFIT` or `SIMDEM` binaries
For `SIMFIT` this would usually be `C:\Program Files\Simfit\bin`, or `C:\Program Files (x86)\Simfit\bin`.
`SIMFIT` will only function correctly if this path is correct, i.e., the `SIMFIT` driver is `C:\Program Files\Simfit\bin\x64_simfit.exe`.
- For `SIMDEM` this would usually be `C:\Program Files\Simdem\bin`, or `C:\Program Files (x86)\Simdem\bin`.

`SIMDEM` will only function correctly if this path is correct, i.e., the `SIMDEM` driver is `C:\Program Files\Simdem\bin\x64_simdem.exe`.

If neither `SIMFIT` nor `SIMDEM` is installed, a blank string can be set to inhibit further checking for the `SIMFIT` driver `w_simfit.exe`. However, a blank string disables several `SIMFIT` and `SIMDEM` functions which rely on the package installation tree. In particular, some files will be treated as local files unless specifically given full paths. Also, the ability to install NAG library and other test data sets will be disabled if item 15 is not the path to a `SIMFIT` or `SIMDEM` driver.

Item 16: The folder where `SIMFIT` results are placed

`...\Documents\Simfit\res`

Item 17: The folder where `SIMFIT` users can store files created by `SIMFIT`

`...\Documents\simfit\usr`

Item 18: The folder where configuration files are stored

`...\Documents\simfit\cfg`

Item 19: Reserved for future developments

Item 20: This can be the fully qualified path/filename for Ghostscript

e.g., `C:\Program Files\gs\gsA.BC\bin\gswin64c.exe` in Windows, where `A.BC` is the Ghostscript release identifier.

As `SIMFIT` now uses the Ghostscript DLL, Item 20 is no longer required.

Item 21: The folder where temporary files are placed, i.e. where the environmental variable `%TEMP%` points.

Item 22: your chosen PS view/print program (path/filename)

In Windows this would be `GSview`, but in Linux it could be any of the built-in PostScript viewers, such as `evince`, `ggv`, `kghostview`, etc.

Item 23: your chosen PDF reader (path/filename)

In Windows this would be `SumatraPDF` or `Acrobat Reader`, but in Linux it could be any of the built-in pdf readers, such as `evince`, `kghostview`, `acroread`, `kpdf`, etc.

Item 24: your chosen Calculator (path/filename)

Any calculator program will suffice.

2.4 Items 25 to 36

These require 0 = false, 1 = true.

These would normally all be set to 1 except for Linux users who would usually switch off items 32 and 33.

If spaces are present in file names it may be necessary to surround the filenames by quotes as, for example, in the command

```
gsview64.exe "C:\Program Files\Simfit\doc\w_manual.pdf"
```

to prevent file names with spaces being broken up into tokens.

Item 25: 0/1, quoted filenames passed to editor

Item 26: 0/1, quoted filenames passed to PS-viewer

Item 27: 0/1, quoted filenames passed to Ghostscript

Item 28: 0/1, quoted filenames passed to PS-printer

Item 29: 0/1, quoted filenames passed to PDF-reader

Item 30: 0/1, paint background for executing program

The background color painted before an executable is called may prove irritating to some users, or may not work correctly under Windows emulation in some OS, so setting 0 will suppress it.

This item is disabled in Linux.

Item 31: 0/1, provide the option to View/Open/Cancel each time a data file is selected. Advanced users may wish to set this to 0 to speed up data analysis.

Item 32: 0/1, display all Windows-specific messages.

Advanced users should set this to 0.

Note that several warning messages are only meaningful to the Windows Operating System and have no value under Linux/Wine, where users should always set this to 0, i.e. switch off

Item 33: 0/1, display ... Now input a file formatted like *.* advice each time a procedure is selected. Advanced users may wish to set this to 0 to speed up data analysis.

Item 34: 0/1, provide the option to type in data values directly as an alternative to using File/Clipboard. Advanced users may wish to set this to 0 to speed up data analysis.

Item 35: 0/1, display ... First time user messages, e.g. alternative file formats when using program **simplot** . Advanced users may wish to set this to 0 to speed up data analysis.

Item 36: 0/1, provide the option to cancel quitting from advanced graphics displays in order to continue with further editing, saving configuration or graphics files, etc. Advanced users may wish to set this to 0 to speed up data analysis.

2.5 Items 37 to 45

These are millisecond wait-times to refresh after calling `CreateProcess` and usually the defaults should be sufficient.

- The case $wait = -1$
If -1 is set, `CreateProcess` will be invoked until the executable terminates. This should be suitable to drive even the most difficult executables, which will usually be those like older versions of `GSview` which read a file and start a thread with another executable, like `Ghostscript`. Unfortunately this causes suppression of screen refresh which can cause annoying persistent screen splash if executables are moved or re-sized. It also prevents executables such as Adobe Acrobat Reader being minimized to the task bar during `SimFJT` operations.
- The case $wait = 0$
If 0 is set there will be no wait and this will be correct for processes that may need to be minimized during `SimFJT` operations, like `Acrobat`, `Notepad`, `Explorer`, the calculator, and clipboard viewer.
- The case $wait > 0$
A value of 100 will use a 100 millisecond delay before refreshing and this could be a good compromise for `GSview`, etc.
- Defaults
The recommended defaults are 0, except for `GSview` and possibly `SimFJT` and some other executables when 100 (or even -1 in extreme cases) may be better.

Item 37: PDF-viewer

Item 38: Calculator

Item 39: Reserved for future developments

Item 40: Editor

- Item 41: Explorer
- Item 42: PS-viewer
- Item 43: SIMFIT programs
- Item 44: Arbitrary programs
- Item 45: PostScript printer driver

2.6 Items 46 to 48

The SIMFIT editor has, by default, 15 rows (down) and 6 columns (across). If the matrix being edited fits into this frame, then the frame is adjusted to the size of the matrix and no scroll bars are added. If the matrix being edited does not fit into the default frame, then scroll bars are added to adjust the offsets into the matrix which permits editing of distant matrix values projected into the editing frame. Users with wide monitors may wish to increase the number of columns (across) and users with large displays may also wish to increase the number of rows (down) before scroll bars are added. The dimensions acceptable will also depend on the user's font size, and can be discovered by experimentation.

The lines plotted by the standard GDI library will often have visible steps due to inadequate pixel density. When the GDI+ library is used, this effect can be offset by antialiasing giving smoother curves. With older operating systems that may not have the GDI+ library, or in the event of any other problems, the use of GDI+ can be switched off by setting item 48 to a negative value. This option is disabled in Linux.

- Item 46: Maximum editor rows before scrolling
- Item 47: Maximum editor columns before scrolling
- Item 48: Use antialiasing line smoothing if this item is ≥ 0

3 Other configuration files

In addition to options stored in `w_simfit.cfg` there are additional configuration files of two types.

1. Files edited by SIMFIT or SIMDEM as an analysis proceeds.
2. Files that can be edited from the buttons on the right hand side of the SIMFIT configuration control.

The format of these additional files and further details can be obtained by reading them in a text editor. However, if you do this then do not attempt any interactive editing unless you are sure what you are doing. If you do screw up one of these files just delete it and allow SIMFIT to create a new (default) copy.

`l_simfit.cfg`: Linux configuration details

pspecial.cfg: PostScript specials

w_clpbrd.cfg: counter for clipboard files saved

w_colors.cfg: colors for simple graphics

w_filter.cfg: filters for file Open/Save As control

w_fsizes.cfg: advanced graphics font sizes

w_graphs.cfg: graph plotting parameters

w_input.cfg : files recently opened

w_labels.cfg: advanced graphics labels

w_matrix.cfg: counter for matrix files saved

w_output.cfg: files recently saved

w_params.cfg: numerical parameters for data editing

w_pathto.cfg: paths for recently opened and saved files

w_ps.cfg : Postscript colors and sizes

w_result.cfg: results files

w_symbol.cfg: advanced graphics symbols

w_vector.cfg: counter for vector files saved