

PLT Tools

A Graphical Interface for the NONMEM System

Installation Manual

Version 6

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Introduction

PLT Tools is a set of utilities to run NONMEM,* manage files, create diagnostic graphics, and manage projects. **PLT Tools** does not replace NONMEM. **The user must install NONMEM (which must be preceded by installation of a Fortran compiler).** NONMEM software can be licensed from Globomax (www.icondevelopment.com). Fortran compilers (Intel Fortran, G95, gfortran) are available commercially (Intel) or *via* free download (g95.org, sourceforce.net).

PLT Tools is available for each of Windows (≥ 7) and OS X (≥ 10.4). Installation and upgrade procedures differ slightly for each platform. **PLT Tools** can be downloaded from PLTsoft.com or media can be purchased from PLTsoft.

Throughout this manual, files, folders, and operating system commands are displayed in a fixed-width font, Courier.

* NONMEM is a trademark of the Regents of the University of California.

Fortran and NONMEM Installations

PLT Tools depends on successful **prior** installation of both a Fortran compiler and NONMEM. NONMEM must be installed using Globomax's installer (the installer provided with the NONMEM installation disk) or Metrum's nmqual installer (<http://code.google.com/p/nmqual/>).

Globomax (nmfe) installation: If this installer is used, a file nmfe6, nmfe7, or nmfe72 (or 73, 74, 75) (nmfe6.bat, nmfe7.bat, nmfe72.bat, etc. in Windows) is created. Default locations are:

NONMEM Version	Windows	OS X
6	C:\nmvi\run\nmfe6.bat	/opt/nmvi/run/nmfe6
7 (and 7.1)	C:\nm7\run\nmfe7.bat	/opt/nm7/run/nmfe7
7.2/7.3/7.4/7.5	C:\nm7\run\nmfe72.bat (or 73, 74, ...)	/opt/nm7/run/nmfe72 (or 73, 74, ...)

If the nmfe file is not available, installation will not be successful.

During startup, **PLT Tools** confirms the existence of nmfe6 (or nmfe6.bat in Windows), then copies that file to the folder PLTTools. If that process is not successful, you will be directed to another section of this manual with instructions as to how to complete the procedure.

The file nmfe6 (nmfe6.bat) contains information as to the Fortran compiler with which NONMEM was compiled. To verify that Fortran is present and operational, **PLT Tools** sends a null Fortran command (e.g., f77 <CR>) to the operating system. The compiler typically replies No input files. This reply is captured by **PLT Tools**. If the reply is something other than "No input files", **PLT Tools** assumes that the Fortran compiler is not installed properly and terminates. If you believe that your Fortran compiler is working correctly but **PLT Tools** terminated with this condition (an explanatory message will appear in the Output window), contact support@PLTsoft.com.

Metrum (nmqual) installation: If this installer is used, a perl file is created – the name of this file is identical to the folder in which the installation is create. For example, if the installation folder is C:\PATH\FOLDERNAME, the file is C:\PATH\FOLDERNAME\Test\FOLDERNAME.pl.

Default locations are:

NONMEM Version	Windows	OS X
6	C:\nmvi\test\nmvi.pl	None suggested
7	C:\nm7\test\nm7.pl	None suggested

However, the user may have selected a different location. Metrum provides configuration files for installation of NONMEM 7 in Windows (using G95) or OS X (using g95 or Intel Fortran).

Default locations for these configurations are:

Platform	Compiler	Location
Windows	G95	C:\nm7g95\test\nm7g95.pl
OS X	G95	\$HOME/NONMEM/nm7g95/test/nm7g95.pl*
OS X	Intel Fortran	\$HOME/NONMEM/nm7ifort/test/nm7ifort.pl*

* \$HOME is the path to the user's home folder, a folder in /Users (the location of this folder can be identified by opening a Terminal window, then typing echo \$HOME).

During startup the user must identify the location of the perl file. **PLT Tools** evaluates the path and filename. If that evaluation suggests that the incorrect file was selected, **PLT Tools** provides additional instructions for installation.

Compatibility of Fortran compilers.

PLT Tools has been tested successfully with the following Fortran compilers: g77, g95, gFortran, and Intel Fortran (versions 10, 11). Users have reported that certain older proprietary Fortran compilers such as Digital Fortran and Compaq Fortran may not be compatible with **PLT Tools**. If you presently use any of those Fortran compilers or **PLT Tools** sends an error message indicating that your compiler is not communicating properly, we recommend that you install a compatible compiler. In particular, g95 (available without charge from www.g95.org) and gfortran (available without charge from <http://gcc.gnu.org/wiki/GFortranBinaries>) work with **PLT Tools**. If you cannot install a compatible compiler, it is possible that these non-compatible Fortran compilers can be made compatible by deleting optimization options. Contact support@PLTsoft.com for assistance.

If you use Intel Fortran in Windows, you need to perform one additional step during the installation process. See the yellow-highlighted text below.

Windows Installation

DOWNLOAD *PLT Tools*

Download the archive for Windows, then, open it by double-clicking. The archive contains two files: SETUP-PLTTools-6.0.exe and READMEFIRST.txt.

WINZIP USERS: If you are using WinZip to handle the archive, be certain to check the box "Use Folder Names" so the folder names are preserved when you extract the files.

INSTALL *PLT Tools*

Click on the installer. The setup procedure should proceed automatically and the following steps will occur:

1. A folder `PLTTools` will be created in the "Program Files" folder on the system drive. If you do not have administrative privileges for that folder, select an alternative location for the installation. If you attempt installation in a location for which you do not have "write" privileges, a message box will explain the problem. Recommended alternatives are `C:\` and your Desktop folder.
2. The application `PLTTools.exe` and related files and folders will be placed into that folder.
3. Folders named `PLTTools-Examples` and `PLTTools-Manuals` will be placed on the Desktop.
4. A shortcut for **PLT Tools** will be placed on the Desktop.
5. The application will open.
6. A file `ReadMe.rtf` will open.

OPEN *PLT Tools*

1. If the application is not already open, open it from the Desktop shortcut or by clicking on the `PLTTools` icon in `C:/Program Files/PLTTools`.
2. Select the path to R (**Figure 1**). This is accomplished in the Software tab in the Preferences menu (figure 1). Navigate to Preferences -> Settings. Usual location for R is (note selection of **Rterm.exe**)

`C:\Program Files\R\R\4.0.3\bin\Rterm.exe`

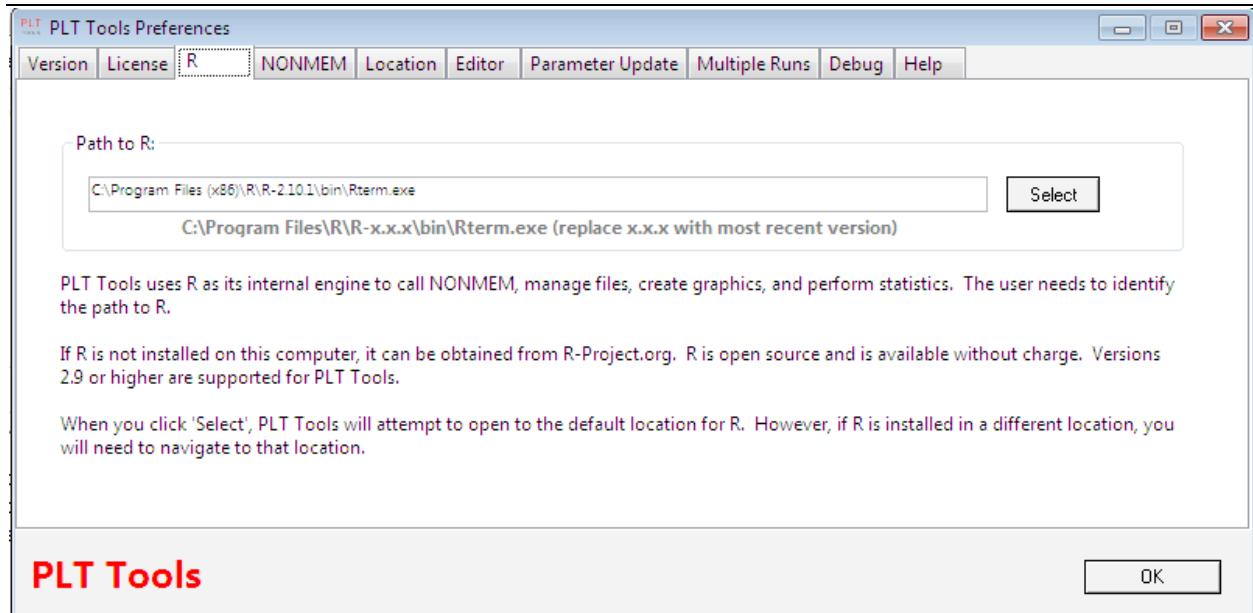


Figure 1. Use the Select button to browse to the location of R.

3. Select the engine to run NONMEM (**Figure 2**), either nmfe or nmqual, then select the path to the NONMEM installation.

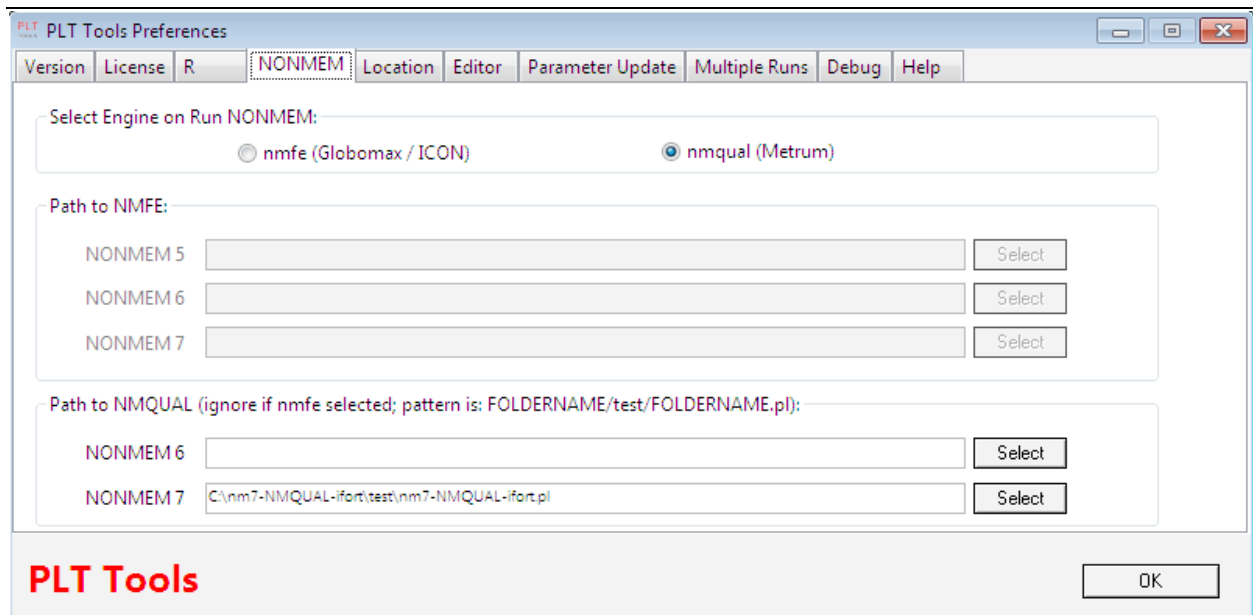


Figure 2. Select either nmfe or nmqual, then select the path to the NONMEM installation.

Default locations are:

nmfe:

Default NONMEM location: see Installation (above)

Folder: run

File:

NONMEM 6: nmfe6.bat

NONMEM 7: nmfe7.bat

nmqual:

Default NONMEM location: see Installation (above)

Folder: test

File: extension is .pl (perl). Filename is identical to foldername, *e.g.*,
C:\nm7-nmqual\test\nm7-nmqual.pl

Intel Fortran in Windows: Intel's compiler makes extensive use of environment variables. These environment variables are set by a batch file named `ifortvars.bat`, provided with the Fortran installation. This information must be passed to **PLT Tools**. To accomplish this:

1. Locate the file `ifortvars.bat`. Typically this file is in a folder in "Program Files" that contains the Intel Fortran compiler, *e.g.*, "C:\Program Files\Intel\Compiler" or "C:\Program Files (x86)\Intel\Compiler".

2. Open a Command Prompt window* and navigate to the folder containing `ifortvars.bat`.

3. Determine which option (also known as a 'switch') `ifortvars.bat` requires. Typical options are: `ia32` (for a 32-bit installation) or `ia64` or `intel64` (for a 64-bit installation). It is possible that no option is required. To determine which option is correct, type:

`ifortvars.bat`

into the Command Prompt window, followed by a carriage return. If Windows replies:

ERROR: Unknown switch

or

The system cannot find the path specified.

try other options (*e.g.*, type: `ifortvars.bat ia32`) until Windows replies with a message that starts with:

Intel(R) Visual Fortran Compiler ...

If you see this message, you have identified the correct option.

4. In **PLT Tools**, select the following menu items:

FILES -> OPEN -> Preferences (APPDATA) Folder

5. To edit `FortranVars.bat`, right-click on the file `FortranVars.bat` and select "Edit".

i. Identify any of the lines containing `@call`. Delete the text `rem` from one of these lines.

ii. In the **same** line, replace the path presently shown with the exact path identified in #1.

iii. Add the correct option, as determined in step #3. Follow the syntax shown in the file.

iv. In the final line of the file, delete the text `rem`.

v. Save the changes.

6. Run **PLT Tools** again. If **PLT Tools** does not run correctly, contact support@PLTsoft.com.

4. Select which version of NONMEM you plan to run (6, 7, 7.2, 7.3, 7.4, or 7.5).

If `nmfe` is selected, the procedure involves identifying a file named `nmfe6.bat` (or `nmfe7.bat` [or `nmfe7n.bat`, where *n* is 2, 3, 4, or 5] if NONMEM 7 has been installed) in a default location, then copying this file to `PLTTools` folder. If the procedure is successful, the Output window (console) will display messages documenting that success. If the procedure is not successful (typically because `nmfe6` was not found), the Output window will display information so that the user can complete the task manually. **PLT Tools** will not be functional until this task is complete. Additional information on manual installation is presented in the section "Locating and Copying `nmfe6.bat` and `nmfe7.bat` (Windows)" in this document.

* In the Windows Start menu, type "cmd" in the Search field, then click "Return". A command prompt window should open.

If nmqual is selected, **PLT Tools** evaluates the path that you provided for nmqual. If the path appears to be incorrect, **PLT Tools** provides messages explaining the problem. If the path is correct, **PLT Tools** copies certain files.

If the installation procedure was successful, you are ready to run **PLT Tools**.

RUN PLT TOOLS

NOTE: PLT Tools will attempt to perform all these steps for you during the first run. This happens only if the initial setup procedure ran successfully and the folder PLTTools-Examples is located in your Desktop folder.

1. Move to the Workspace / Options window (**Figure 3**). **PLT Tools** may have already selected a Project Folder for you. If not, use the pull-down menu indicated by the arrow to select a Project Folder. We recommend selecting PLTTools-Examples\PLTTOOLS.FIRST.RUN\WORKING in the Desktop folder.

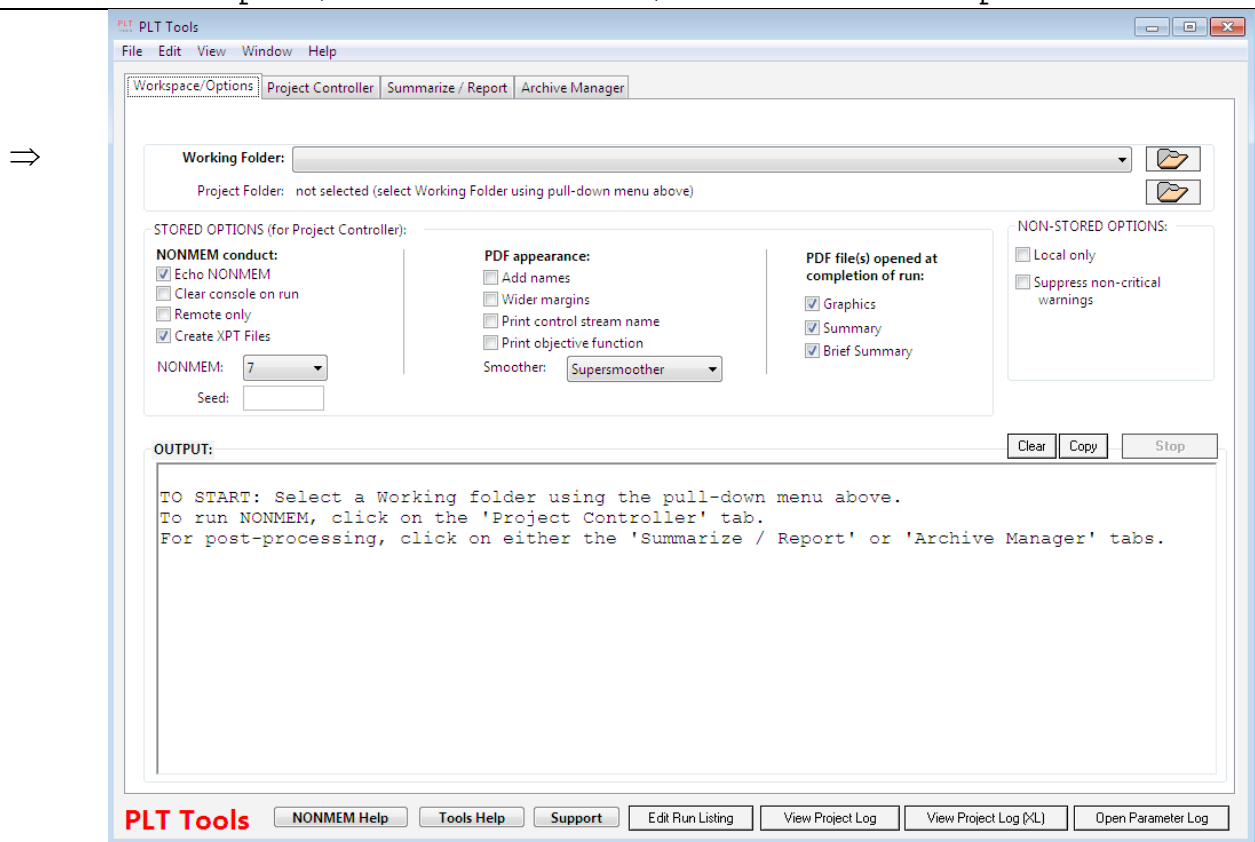


Figure 3. Select a Project Folder by using the pull-down menu (see arrow above). During the first installation, the Welcome menu may populate this field for you.

2. Move to the Project Controller window (**Figure 4**). Click on the pull-down menu adjacent to Control Stream to select a Control Stream. **PLT Tools** may have already selected the Control Stream.

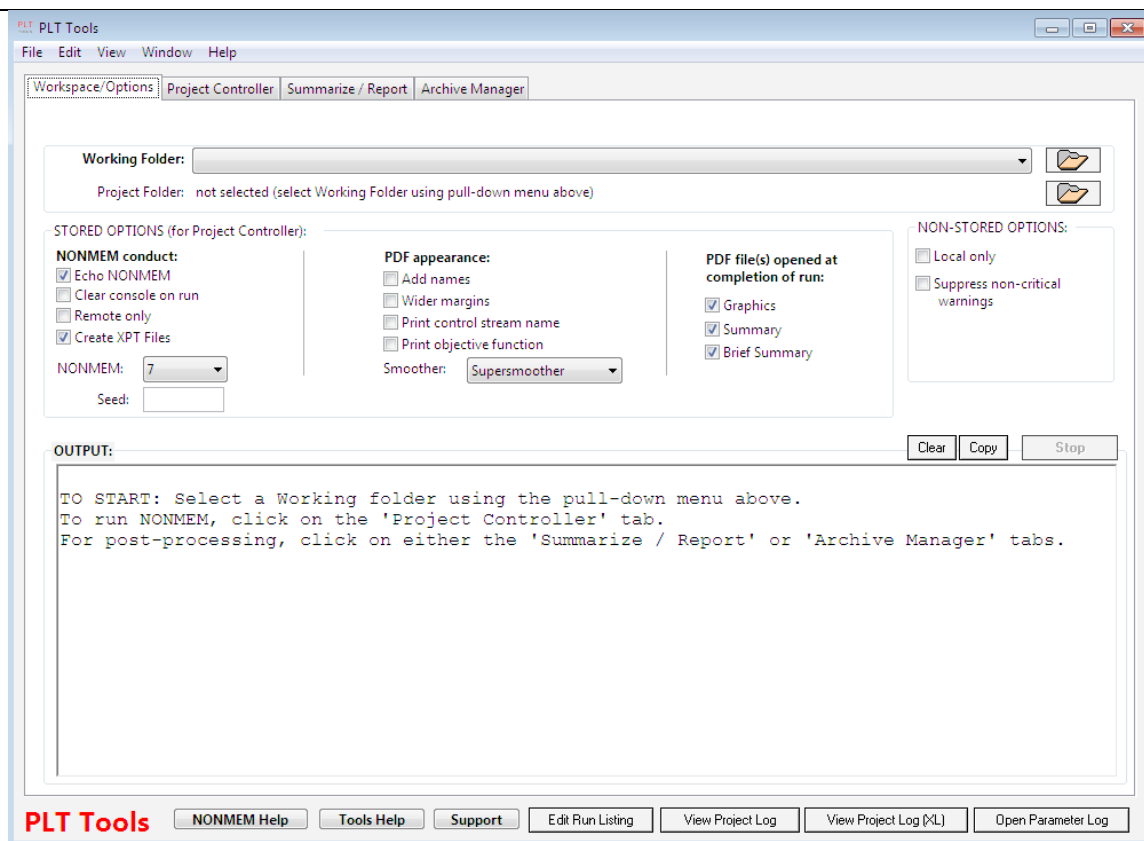


Figure 4. Select a Control Stream by using the pull-down menu (see arrow above). During the first installation, the Welcome menu may populate this field for you.

3. Optional: Select a Graphics Script using the Graphics Script pull-down menu

4. To perform a NONMEM analysis, click NONMEM + Graphics.

It may be easiest to familiarize yourself by running examples that we have provided. These examples can be found in the folder `PLTTools-Examples` in your Desktop folder.

OS X Installation

DOWNLOAD *PLT Tools*

Download the archive for OS X, then, open it by double-clicking. The archive contains two files: `PLTTools-Installer-2.5.app` and `READMEFIRST.txt`.

INSTALL *PLT Tools*

Click on the installer. The setup procedure should proceed automatically. The following steps will occur:

1. A folder `PLTTools` will be created in the `/Applications` folder. If you do not have administrative privileges for that folder, select an alternative location for the installation. If you attempt installation in a location for which you do not have "write" privileges, a message box will explain the problem. A recommended alternative is the Desktop folder.
2. The application `PLTTools.app` and related files and folders will be placed into that folder.
3. Folders named `PLTTools-Examples` and `PLTTools-Manuals` will be placed on the Desktop.
4. A file `ReadMe.rtf` will open.
5. Optional: Create an alias for the application by selecting the application **PLT Tools** in the folder `/Applications/PLTTools`, then **⌘L** (or, in the File menu, "Make Alias").

OPEN *PLT Tools*

1. If the application is not already open, open it from either the Desktop alias or by clicking on the `PLTTools` icon in `/Applications/PLTTools`.
2. Configure **PLT Tools** to use R This is accomplished in the Software tab in the Preferences menu (**Figure 5**). Usual location for R is:
`/Library/Frameworks/R.framework/Versions/2.x/Resources/bin/R`

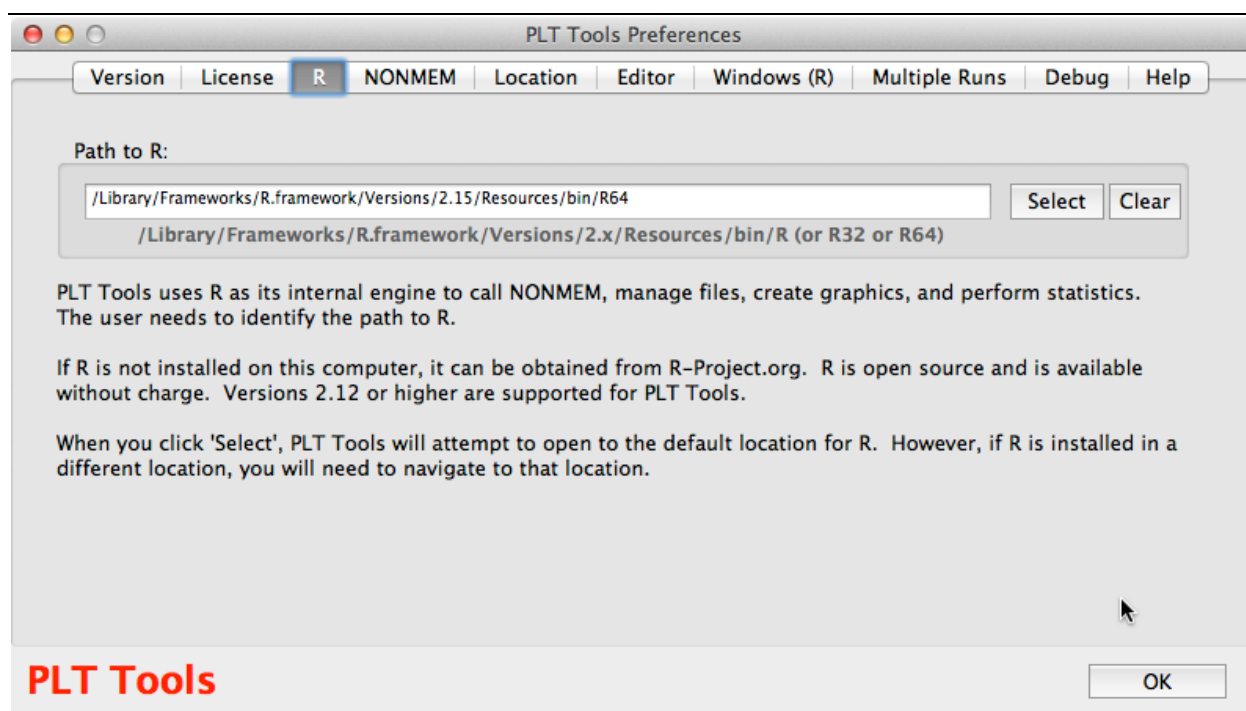


Figure 5. Use the Select button to browse to the location of R. Then select either nmfe or nmqual. If you select nmqual, you also need to select the path to nmqual.

3. Select the engine to run NONMEM, either nmfe or nmqual, then select the path to the NONMEM installation. Default locations are:

nmfe:

Default NONMEM location: see Installation (above)

Folder: run

File:

NONMEM 6:	nmfe6
NONMEM 7:	nmfe7
NONMEM 7.2:	nmfe72
NONMEM 7.3:	nmfe73
NONMEM 7.4:	nmfe74
NONMEM 7.5:	nmfe75

nmqual:

Default NONMEM location: see Installation (above)

Folder: test

File: extension is .pl (perl). Filename is identical to foldername, e.g.,
/opt/nm7-nmqual/test/nm7-nmqual.pl

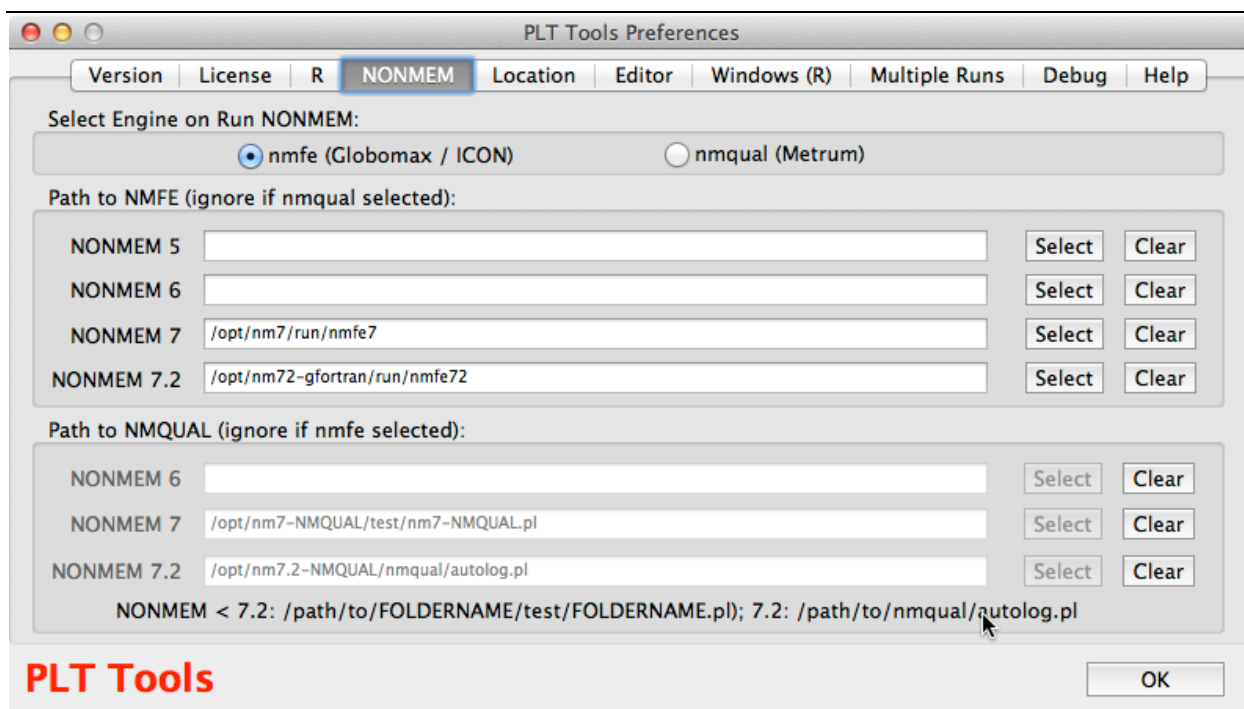


Figure 6. Select either nmfe or nmqual, then select the path to the NONMEM installation.

4. Select which version of NONMEM you plan to run (5, 6, 7, 7.2, 7.3, 7.4 or 7.5).
5. In the Workspace / Options tab of **PLT Tools**, select a Working Folder (figure 2) using the pull-down menu. We recommend selecting `PLTTools-Examples/PLTTOOLS.FIRST.RUN/WORKING` in the Desktop folder.

NOTE: **PLT Tools** attempts to perform step #5 for you.

Next, **PLT Tools** initiates the automated installation procedure.

If nmfe is selected, the procedure involves identifying a file named `nmfe6.bat` (or `nmfe7.bat` if NONMEM 7 has been installed) in a default location, then copying this file to **PLTTools** folder. If the procedure is successful, the Output window (console) will display messages documenting that success. If the procedure is not successful (typically because `nmfe6` was not found), the Output window will display information so that the user can complete the task manually. **PLT Tools** will not be functional until this task is complete. Additional information on manual installation is presented in the section "Locating and Copying `nmfe5.bat`, `nmfe6.bat`, and `nmfe7.bat` (Windows)" in this document.

If nmqual is selected, **PLT Tools** evaluates the path that you provided for nmqual. If the path appears to be incorrect, **PLT Tools** provides messages explaining the problem. If the path is correct, **PLT Tools** copies certain files.

If the installation procedure was successful, you are ready to run **PLT Tools**.

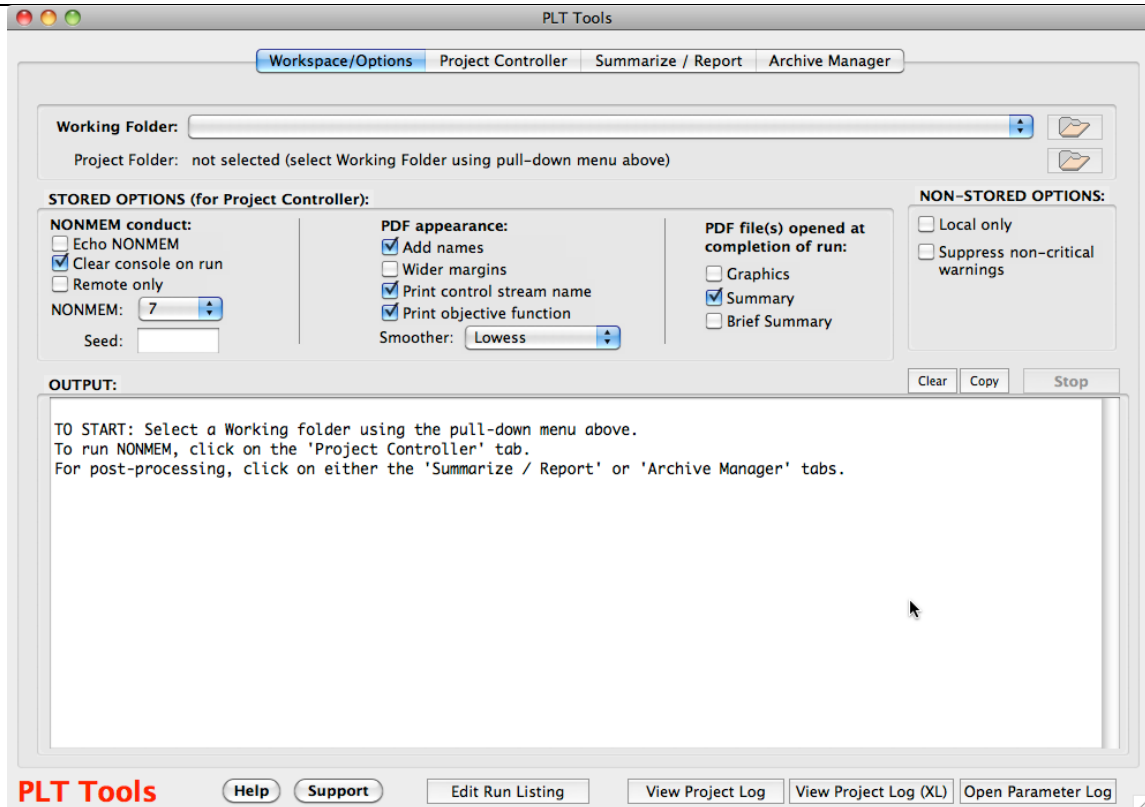


Figure 4. Select a Working Folder by using the pull-down menu (see arrow above). During the first installation, the Welcome menu may populate this field for you.

RUN PLT TOOLS

NOTE: **PLT Tools** will attempt to perform all these steps for you during the first run. This happens only if the initial setup procedure ran successfully and the folder PLTTools-Examples is located in your Desktop folder.

1. Move to the Workspace / Options window (**Figure 7**). **PLT Tools** may have already selected a Project Folder for you. If not, use the pull-down menu indicated by the arrow to select a Project Folder. We recommend selecting PLTTools-Examples\PLTTOOLS.FIRST.RUN\WORKING in the Desktop folder.

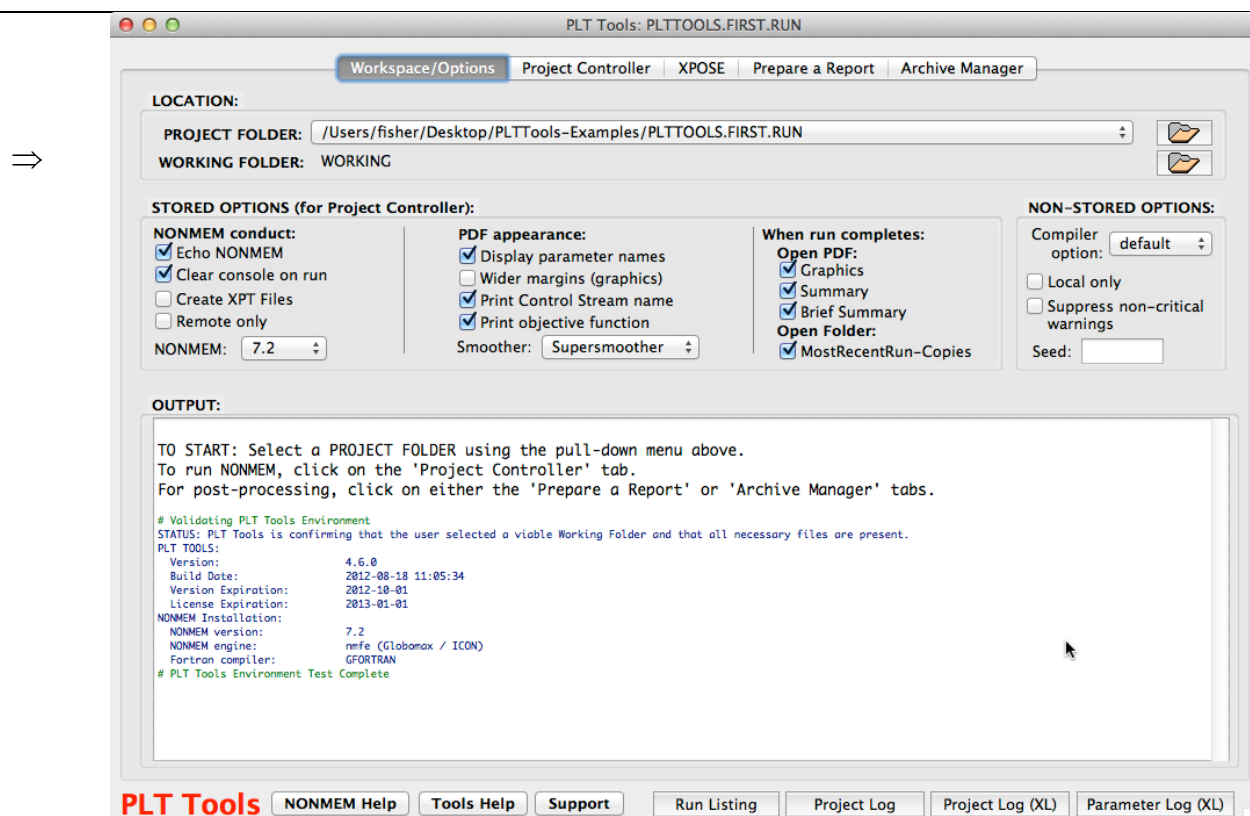


Figure 7. Select a Project Folder by using the pull-down menu (see arrow above). During the first installation, the Welcome menu may populate this field for you.

2. Move to the Project Controller window (**Figure 8**). Click on the pull-down menu adjacent to Control Stream to select a Control Stream. **PLT Tools** may have already selected the Control Stream.

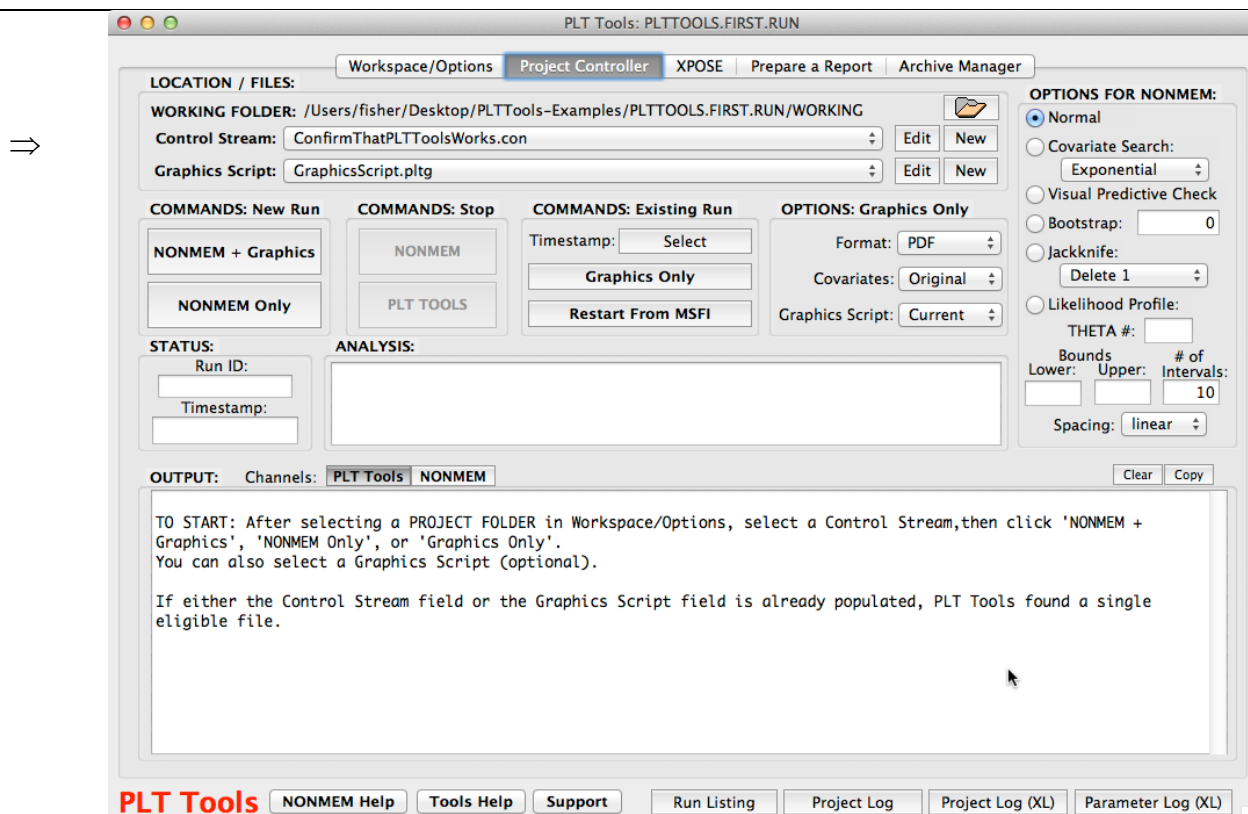


Figure 8. Select a Control Stream by using the pull-down menu (see arrow above). During the first installation, the Welcome menu may populate this field for you.

3. Optional: Select a Graphics Script using the Graphics Script pull-down menu
4. To perform a NONMEM analysis, click NONMEM + Graphics.

It may be easiest to familiarize yourself by running examples that we have provided. These examples can be found in the folder `PLTTools-Examples` in your Desktop folder.

If **PLT Tools** Does Not Run

If NONMEM has been installed using default settings for either of the installers (Globomax or Metrum) and if the Fortran environment variables are set correctly, **PLT Tools** typically runs "out of the box". However, there are many subtle and not-so-subtle reasons why **PLT Tools** may not run. PLTsoft can assist you in resolving these problems. To do so, we need certain information about your setup sent to us via email (support@PLTsoft.com).

If **PLT Tools** does not run or if an error message regarding conduct of **PLT Tools** appears, please do the following:

1. Click on the SUPPORT button. An email will open; the address field will be populated.
2. A message box will request that you provide a detailed description of the problem, including screen snapshots if appropriate.
3. The folder PLTTools/DEBUGGING.FOLDER will open. Please attach all the files in that folder to the email.

Typically, you will receive instructions within one business day directing you as to how the problem can be solved.

Debugging Yourself (Windows)

You can also test / debug your setup using the following steps (these instructions are based on NONMEM 6; if you are testing a different version of NONMEM, change the commands accordingly):

1. Open a Command Prompt window.
2. Navigate to \nmvi\run (type: `cd \nmvi\run`)
3. Run one example by typing: `nmfe6.bat CONTROL3 XXX`

If this does not run successfully, the problem lies in your installation.

4. Navigate to one of our examples by opening a new command prompt, then typing:
`cd Desktop\PLTTools-Examples\PLTTOOLS.FIRST.RUN\WORKING`

Run one example using the same version of nmfe6.bat. Type:

```
\nmvi\run\nmfe6.bat ConfirmThatPLTToolsWorks.com XXX
```

The outcome should be identical to the previous step.

5. Next, type:
`"\Program Files\PLTTools\nmfe6.bat" ConfirmThatPLTToolsWorks.com XXX`

If this does not run successfully but the previous step succeeded, the problem lies with the copying of nmfe6.bat to the PLTTools folder. If so, type the following two commands:

```
del "\Program Files\PLTTools\nmfe6.bat"
copy \nmvi\run\nmfe6.bat "\Program Files\PLTTools"
```

Then, restart **PLT Tools**. If it does not run successfully, contact support@PLTsoft.com.

Upgrades

Upgrades will be issued periodically, either to add features or to fix bugs. Download the platform-specific archive, then follow the instructions presented above. Installation of the upgrade package follows the same procedure as a first installation.

Locating and Copying nmfe5.bat, nmfe6.bat, and nmfe7.bat (Windows)

During the NONMEM installation process using Globomax's SETUP routine, files named nmfe5.bat, nmfe6.bat and nmfe7.bat were created. **PLT Tools** has an automated process to locate and copy these files. This process is run the first time that you use **PLT Tools**. If it is successful, the process is never run again (unless you move or rename the file or you select a different version of NONMEM). Because of the flexibility with which NONMEM can be configured, the process of identifying the correct version of nmfe5.bat, nmfe6.bat, or nmfe7.bat may be unsuccessful. If this happens, diagnostic information will be provided (see Output window in the graphical interface) and you will be directed to the instructions appearing below.

nmfe5.bat: A typical location is \nmv\run; however, the user may have installed NONMEM in a location other than \nmv or may have moved the file to a different folder. Note that there are TWO copies of the file nmfe5.bat: \nmv\NMF5E5.bat (upper case) and \nmvi\run\nmfe5.bat (lower case). The first of these is used during the installation process as the template for creation of the second file. A COPY of the second file needs to be placed into the folder PLTTools. There are two means to copy this file:

- a. select the file, then copy, then paste it into the folder PLTTools
 - b. open the Command Prompt application, then type:
copy \nmv\run\nmfe5.bat C:\Program Files\PLTTools
- If there is no error message, the copy command was successful.

nmfe6.bat: A typical location is \nmvi\run; however, the user may have installed NONMEM in a location other than \nmvi or may have moved the file to a different folder. Note that there are TWO copies of the file nmfe6.bat: \nmvi\NMF6E6.bat (upper case) and \nmvi\run\nmfe6.bat (lower case). The first of these is used during the installation process as the template for creation of the second file. A COPY of the second file needs to be placed into the folder PLTTools. There are two means to copy this file:

- a. select the file, then copy, then paste it into the folder PLTTools
 - b. open the Command Prompt application, then type:
copy \nmvi\run\nmfe6.bat C:\Program Files\PLTTools
- If there is no error message, the copy command was successful.

nmfe7.bat: A typical location is \nm7\run; however, the user may have installed NONMEM in a location other than \nm7 or may have moved the file to a different folder. Note that there are TWO copies of the file nmfe7.bat: \nm7\NMF7E7.bat (upper case) and \nm7\run\nmfe7.bat (lower case). The first of these is used during the installation process as the template for creation of the second file. A COPY of the second file needs to be placed into the folder PLTTools. There are two means to copy this file:

- a. select the file, then copy, then paste it into the folder PLTTools
 - b. open the Command Prompt application, then type:
copy \nm7_1.0\run\nmfe7.bat C:\Program Files\PLTTools
- If there is no error message, the copy command was successful.

Locating and Copying nmfe5, nmfe6, and nmfe7 (OS X)

During the NONMEM installation process using Globomax's SETUP routine, files named nmfe5, nmfe6, and nmfe7 were created. **PLT Tools** has an automated process to locate and copy these files. This process is run the first time that you use **PLT Tools**. If it is successful, the process is never run again (unless you move or rename the file or you select a different version of NONMEM). However, because of the flexibility with which NONMEM can be configured, the process of identifying the correct version of nmfe6 and nmfe7 may be unsuccessful. If this happens, diagnostic information will be provided (see Output window in the graphical interface) and you will be directed to the instructions appearing below.

nmfe5: A typical location is /opt/nmv/run. Note that there are TWO copies of the file nmfe6: /opt/nmv/NMFE5 (upper case) and /opt/nmv/run/nmfe5 (lower case). The first of these is used during the installation process as the template for creation of the second file. A COPY of this second file needs to be placed into the folder /Applications/PLTTools. There are two means to copy this file:

- a. option-drag the file to the folder PLTTools
- b. in a terminal window, type
`cp /opt/nmv/run/nmfe5 /Applications/PLTTools`

If there is no error message, the copy command was successful.

nmfe6: A typical location is /opt/nmvi/run. Note that there are TWO copies of the file nmfe6: /opt/nmvi/NMFE6 (upper case) and /opt/nmvi/run/nmfe6 (lower case). The first of these is used during the installation process as the template for creation of the second file. A COPY of this second file needs to be placed into the folder /Applications/PLTTools. There are two means to copy this file:

- a. option-drag the file to the folder PLTTools
- b. in a terminal window, type
`cp /opt/nmvi/run/nmfe6 /Applications/PLTTools`

If there is no error message, the copy command was successful.

nmfe7: A typical location is /opt/nm7/run. Note that there are TWO copies of the file nmfe7: /opt/nm7/NMFE7 (upper case) and /opt/nm7/run/nmfe7 (lower case). The first of these is used during the installation process as the template for creation of the second file. A COPY of this second file needs to be placed into the folder /Applications/PLTTools. There are two means to copy this file:

- a. option-drag the file to the folder PLTTools
- b. in a terminal window, type
`cp /opt/nm7/run/nmfe7 /Applications/PLTTools`

If there is no error message, the copy command was successful.

Compiling nmsee (Windows)

Several tasks performed by **PLT Tools** require a script (batch file), `nmsee` that then calls `nmsee.exe`. The folder `PLTTools` contains a platform-specific compiled version of `nmsee.exe`. If you receive a message directing you to the Installation Guide, you need to confirm that `nmsee.bat` and `nmsee.exe` work properly on your computer.

1. Open the Command Prompt application, then navigate to a Project Folder (explained in the User's Manual). Type:

```
cd TEXTFILES\RAWOUTPUT
dir
```

If at least one file is present, examine that file by typing:

```
notepad Output.TIMESTAMP.txt,
```

where `TIMESTAMP` is the 13-character timestamp; confirm that it contains the unprocessed output of a `NONMEM` run. At minimum, text such as `$PROB` should appear.

3. Type:

```
\PLTTools\NMSEEFOLDER\nmsee.bat Output.TIMESTAMP.txt
```

Text similar to the original file (generally shorter) should appear. If this text does not appear, it is likely that `nmsee.exe`, a compiled version of `nmsee.for`, is not compiled appropriately for your operating system.

4. To compile `nmsee.exe` for your operating system, you first need to identify the Fortran compiler installed on your computer. Type:

```
more nmfe6.bat
```

and look for a line resembling:

```
set f=g95
```

(ignore lines preceded by `#`). In this instance, the Fortran compiler is `g95`. Other likely possibilities are `g77`, `ifort`, or `f77`.

5. To compile `nmsee.exe` for your operating system, type:

```
cd C:\PLTTools\NMSEEFOLDER
g95 -o nmsee.exe nmsee.for
```

If you are using a different compiler, substitute the name of that compiler, *e.g.*,

```
cd C:\PLTTools\NMSEEFOLDER
f77 -o nmsee.exe nmsee.for
```

6. Repeat steps 1-3 to confirm that `nmsee.for` was compiled correctly. If problems persist, contact PLTsoft (support@PLTsoft.com).

Compiling nmsee (OS X)

Several tasks performed by **PLT Tools** require a script (batch file), `nmsee` that then calls `nmsee.exe`. The folder `PLTTools` contains a platform-specific compiled version of `nmsee.exe`. If you receive a message directing you to the Installation Guide, you need to confirm that `nmsee` and `nmsee.exe` work properly on your computer.

1. In a terminal window, navigate to a Project Folder (explained in the User's Manual). Type:

```
cd TEXTFILES/RAWOUTPUT
```

```
ls
```

If at least one file is present, examine that file by typing:

```
more Output.TIMESTAMP.txt
```

where `TIMESTAMP` is the 13-character timestamp; confirm that it contains the unprocessed output of a `NONMEM` run. At minimum, text such as `$PROB` should appear in the file.

2. Type:

```
/Applications/PLTTools/NMSEEFOLDER/nmsee Output.TIMESTAMP.txt
```

Text similar to the original file (generally shorter) should appear. If this text does not appear, it is likely that `nmsee.exe`, a compiled version of `nmsee.for`, is not compiled appropriately for your operating system.

3. To compile `nmsee.exe` for your operating system, you first need to identify the Fortran compiler installed on your computer. Type:

```
more nmfe6
```

and look for a line resembling:

```
set f=g95
```

(ignore lines preceded by `#`). In this instance, the Fortran compiler is `g95`. Other likely possibilities are `g77` and `f77`.

4. To compile `nmsee.exe` for your operating system, type

```
cd /Applications/PLTTools/NMSEEFOLDER  
g95 -o nmsee.exe nmsee.for
```

If you are using a different compiler, substitute the name of that compiler, *e.g.*,

```
f77 -o nmsee.exe nmsee.for
```

5. Repeat step 1 to confirm that `nmsee.for` was compiled correctly. If problems persist, contact PLTsoft (support@PLTsoft.com).

Troubleshooting

Path to Fortran could not be identified

An error message “the path to Fortran could not be identified” indicates that the environment variables were not set correctly for PLT Tools. This can be fixed using one of two different approaches:

1. Edit the appropriate nmfe file in the Preferences folder (access the folder from File -> Open).

You will find a line with the format:

```
f=fortran
```

or

```
set f=fortran
```

where “fortran” might be ifort or gfortran. Replace that line with:

```
f=/path/to/fortran
```

or

```
set f=/path/to/fortran
```

where /path/to/ is the path to fortran. For example, the edited line might be:

```
f=/usr/local/bin/fortran
```

or

```
set f=/usr/local/bin/fortran
```

2. Edit the file FortranVars in the Preferences folder (access the folder from File -> Open). The file contains instructions.

The first approach generally works best with gfortran. The second approach is typically more appropriate with Intel Fortran. If these efforts are not successful, contact support@PLessThan.com.

Network Drives in Windows:

Network drives may exist without assignment of a drive letter. If the user selects such a drive, WorkingFolder will appear in the Workspace / Option window, preceded by a double backslash (e.g., `\\computer.net\dfs`). **PLT Tools** is unable to access these files. An error message should appear explaining that a drive letter needs to be assigned. In some situations, the problem can be resolved by mapping the network drive. In this example, open a Command Prompt and type:

```
net use z: \\computer.net\dfs
```

Then, reselect the Working Folder. If that is not successful, contact support@PLTsoft.com. Additional steps, including changing an environment variable (%USERPROFILE%) may be necessary.

Windows: NMTRAN is complete; NONMEM has not started

In Windows, the most common reason for **PLT Tools** to not work immediately involves environment variables. In order for NONMEM to run, the location (path) of the Fortran

compiler and its libraries must be passed to nmfe.bat or nmqual.bat. Many setups do not pass these environment variables correctly. For example, the installer for G95 edits the PATH environment correctly to indicate the location of the G95 compiler. However, it does not set the path for the G95 library (the correct command resembles:

```
set library_path= "C:\path\to\G95\lib"
```

In this situation, NMTRAN may execute correctly but NONMEM cannot start. Two solutions are available. First, the user can edit the environment variables (Control Panels -> System -> Advanced System Settings) by adding an environment variable `LIBRARY_PATH` with the correct path to the G95 library. Alternatively, the user can provide similar instructions directly to **PLT Tools** by editing the file FortranVars.bat, located in the Preferences Folder (in **PLT Tools**, access that folder from the menu: File -> Open -> Preferences (APPDATA) Folder).

Edit the file FortranVars.bat. A line of that file presently reads:

```
rem set LIBRARY_PATH=c:\g95\lib
```

The text `rem` indicates that the text that follows is a comment; delete that text, then replace the path shown above (`c:\g95\lib`) with value relevant to your computer. The next time that **PLT Tools** runs, the path should be set correctly and NONMEM should start successfully. If that does not occur, contact support@PLTsoft.com.