

# Installation

The installation is dependent on the version you have received (MATLAB or free-standing).

## MATLAB version

This is a set of m-files that should work with MATLAB v7.6 or higher on any platform (it is currently written in MATLAB 7.8 [2009a]). In addition to basic MATLAB it is also dependent on the Optimization and Statistics Toolboxes.

1. Unzip the DOSYToolbox\_vXXX.zip to your preferred directory.
2. Add that directory (with subdirectories) to the MATLAB path.
3. Type "DOSYToolbox" to start the graphical user interface.

## Free-standing version

The DOSY Toolbox is available as a free-standing, compiled, version for Windows, Linux and Macintosh. These versions are dependent on the MATLAB Component Runtime (MCR) library, which is provided with the compiled DOSYToolbox software. A different version of the MCR library is needed for each platform and for each version of the MATLAB compiler used to generate the free-standing code. If the DOSYToolbox does not run as expected you may be using the wrong MCR library; please contact me for an updated version. The MCR library only needs to be installed once on each machine, and not for subsequent versions of the DOSYToolbox provided these used the same version of the MATLAB compiler.

## Windows

1. Only for the first installation of the programme. You may require to install [Microsoft Visual C++ 2008 Redistributable Package \(x86\)](#)

Put the installer in your preferred directory and run it. This will install the DOSYToolbox programme together with the MCR libraries (you may want to remove the MCRIInstaller.exe afterwards – see next step).

1. Installation of an update. The program is distributed in the file DOSYToolbox\_pkg\_vXX\_updateXXX.exe. To install the programme, copy the file to your preferred directory and run it. However, if the MCRIInstaller.exe is present in that folder it will be automatically run, so it may be useful to remove MCRIInstaller.exe after the first installation.
2. Start the programme by clicking on DOSYToolbox.exe

## Linux

1. unzip the DOSYToolbox\_XXX\_pkg into your preferred installation directory. Use the archive manager (gzip -d does not seem to work)
2. install the MCR Components by running MCRIInstaller.bin (./MCRIInstaller.bin). You will have to make a decision on where to install the libraries (e.g.

/home/nmruser/MCR)

3. run the programme using the shell script "run\_DOSYToolbox\*.sh", giving the location of the v710 directory as an argument (e.g. ./run\_DOSYToolbox06\_Linux32.sh /home/nmruser/MCR/v710)

## Optional

The programme can also be started by running the executable "DOSYToolbox..." (e.g. ./DOSYToolbox06\_Linux32), but then you must set some environment variables (automatically set in the run\_\* macro). In the cshell this would be (for the example above)

```
setenv LD_LIBRARY_PATH
    /home/nmruser/MCR/v710/runtime/glnx86:
    /home/nmruser/MCR/v710/sys/os/glnx86:
    /home/nmruser/MCR/v710/sys/java/jre/glnx86/jre1.6.0/lib/i386/native_t
hreads:
    /home/nmruser/MCR/v710/sys/java/jre/glnx86/jre1.6.0/lib/i386/server:
    /home/nmruser/MCR/v710/sys/java/jre/glnx86/jre1.6.0/lib/i386
setenv XAPPLRESDIR<mcr_root> /home/nmruser/MCR/v710/X11/app-defaults
```

## Mac

## Mac

1. unzip the DOSYToolbox\_XXX\_pkg into your preferred installation directory. Use the archive manager (gzip -d does not seem to work)
2. install the MCR Components by running MCRInstaller.bin (./MCRinstaller.bin). You will have to make a decision on where to install the libraries (e.g. /home/nmruser/MCR)
3. run the programme using the shell script "run\_DOSYToolbox\*.sh", giving the location of the v710 directory as an argument (e.g. ./run\_DOSYToolbox06\_Linux32.sh /home/nmruser/MCR/v710)

An alternative and more detailed set of instructions has been provided by Giuseppe Balacco (thanks) for users of iNMR. Here it has been slightly altered. The original can be found at [<http://www.inmr.net/articles/DOSY.html>]:

1. Install the MCR installer as above
2. When you have installed the runtime, it goes into this location:

/Applications/MATLAB/MATLAB\_Compiler\_Runtime/v710

It is important to know it, because it is a required argument to launch the DOSY Toolbox. The latter can be conveniently installed into your home directory or a sub-directory. The Toolbox comes as a folder. Into this folder there is a unix shell script that runs the program. The name of the script is something like: "run\_DOSYToolbox.sh" In practice, to start the program you need to open the Terminal application and type a command structured in this way:

/path/to/the/script /path/to/the/runtime

For example:

DOSY\_Toolbox/run\_DOSYToolbox.sh

`/Applications/MATLAB/MATLAB_Compiler_Runtime/v710`

Given that this command is quite long, it is convenient to save it too as another script, with a compact name like “DOSY.sh”.

The Terminal application remains important during the execution too. If the Toolbox detects an error, you will hear a beep and will see no message of explanation. In this case, look into the Terminal window, because the message has been written there.