

Help ExpId

ExpId installation

The ExpId toolbox installation procedures

1. Copy the ExpId toolbox folder to: matlab/toolbox/ (here matlab represents the full path to the Matlab folder, e.g C:\MATLAB6p5\toolbox)
2. Start MATLAB
3. Go to: *File – Set Path... – Add Folder...* – (Choose the ExpId folder from *matlab/toolbox/expid/*)
4. After adding the ExpId folder apply changes by using the save button.

Supported file types

Text files saved in ASCII format containing only data meant for processing of row or column vectors. The files should **not include headings**.

Launch the ExpId Gui

In the MATLAB command window type **expid**

Working with ExpId

1. Run ExpId
2. Click on *load file >>*
3. Choose the file name for processing and click ok
4. Set the vector types, time vectors, input and output vectors
5. Set type of filtering (optional)
6. Choose an identification method and click on *Identification>>*

Results of the identification can be viewed in the “result of identification“ part.

Set-up conditions

Vector types:

Vector numbers - Integers greater than zero

System filtering:

Degree of polynomial - Integer variable greater than zero

Frequency - Number from the interval (0, 1)

Note: Adopted filtration method: commands butter, filtfilt (for more information see help butter, help filtfilt)

Identification

Step response – defined as vectors in MATLAB, if no Unit-step response was selected for the identification, all unit-step responses will be processed.

Expected time delay- must be less then or equal as the Expected time delay of the system. (Strejc,Broid method)

Point 1- value from scope 0 to 100%, recommended value from 10 to 40% (first order system)

Point 2 - value from scope 0 to 100%, recommended value from 70 to 90% (first order system)

ExpId menu

Exit ExpId – quit ExpId

Save as – saves the last successful identification in form of structure data

Language – changes the language (English and Slovak language supported)

Plot setting – setting that allows you to draw the progress of the identification into one, two or no graph.

Help – shows the ExpId manual, web pages for support and informations about ExpId

Change of default values

In ExpId expid.m file

Define slovak language as the default language – line 96, form:

`expid____gendata.language == 'sk';`

Define slovak language as the default language – line 96, form:

`expid____gendata.language == 'en';`

“No graph showing” setting – line 97, form:

`expid____gendata.depicture == 0;`

“Show only one graph” setting – line 97, form:

`expid____gendata.depicture == 1;`

“Showing two graphs” setting – line 97, form:

`expid____gendata.depicture == 2;`