

Some Useful MATLAB® Commands

- `%` indicates a comment
- `A = [23, 25, 49, 44, 25];` %Creates an row vector of data
- `B = logspace(1,3,5);` %Creates logarithmically spaced row vector of 5 elements from 10^1 to 10^3
- `C = linspace(1,20,50);` %Creates a linearly spaced row vector with 50 elements from 1 to 20
- `plot(B,A);` %Plots a linear graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a solid line
- `plot(B,A,'-');` %Plots a linear graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a dashed line
- `plot(B,A,'o');` %Plots a linear graph of A (ordinate) vs. vector B (abscissa) with the data shown as points labeled as 'o'
- `semilogx(B,A);` %Plots a semilog graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a solid line
- `semilogx(B,A,'-');` %Plots a semilog graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a dashed line
- `semilogx(B,A,'o');` %Plots a semilog graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as points labeled as 'o'
- `grid on;` % Puts in grid lines and draws a box around the plot
- `ylabel('Voltage (mV)');` %This does what you would expect
- `xlabel('Frequency (Hz)');` %This does what you would expect
- `title(['Figure Title ', date]);` %Places a title with the date above the figure
- `help command` %Displays information about the command
- `doc command` %Displays reference page in the Help browser
- `lookfor keyword` %Search all MATLAB files for the keyword
- `clear variables` %Clears variables in the Workspace
- `clc` %Clears the Command Window
- `addpath('directory')` %Add 'directory' to the Matlab path

NGspice MATLAB® Toolbox Functions

- `hspc_addline ('statement', hspc_filename);` %add 'statement' to the hspc file
- `hspc_set_param('ngspice_param', matlab_variable, hspc_filename);` %sets schematic parameter to Matlab variable
- `ngsim(hspc_filename);` %run NGspice using hspc.filename as the control file
- `sim_data = loadsig('simrun.raw');` %load NGspice data into Matlab variable sim_data
- `Vout=evalsig(sim_data, 'vout');` %extract node voltage vout to Matlab variable Vout