

Capture TDS1002b Oscilloscope Traces with Matlab

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Initial Setup (one time):

It is assumed that Matlab and TEKVISA (available free from Tektronics) are installed on your machine. Your USB cable should be attached to the port on the back of the oscilloscope, not the front. If you run TEKVISA instrument manager your scope should be recognized.

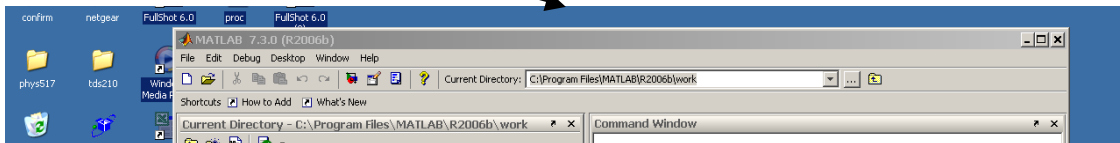
Make a directory `c:\Matlab_Scope`. Copy the file:

http://www.physics.ohio-state.edu/~durkin/phys517/Matlab/Matlab_TDS1002b.zip

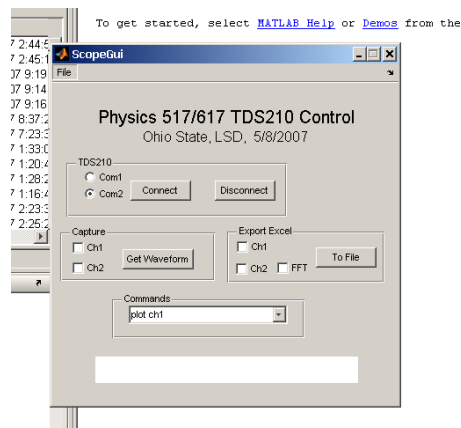
into this directory and extract the scripts into this directory using WinZip. You need to modify the file `c:\Matlab_Scope\openscope.m`. Replace the address '`USB::1689::867::C059039::0::INSTR`' with the address of your scope reported by TEKVISA instrument manager. This change must be made in two places in the file.

Running Matlab Gui:

- 1) Run Matlab (*All Programs->MATLAB->R2008b->MATLAB R2008b*).
- 2) Using the desktop toolbar below change the current directory to `c:\Matlab_TDS1002b`.



- 3) At the Matlab command prompt type: `ScopeGui`. The following Gui should appear.



- 4) Capture Ch1, Ch2, or both.
- 5) The data can be exported to an Excel file (export excel), or one can plot the scope data, and perform various fits/transforms on the data (commands).

Trouble Shooting:

If the Gui fails connect to the scope, first check the USB cable is connected to the computer and the back USB connector of the scope. If the cable is present but there is still a problem, start the TEKVISA instrument manager and see that the scope is recognized. Make sure the USB port listed in the instrument manager matches that in openscope.m in the C:\Matlab_TDS1002b directory.