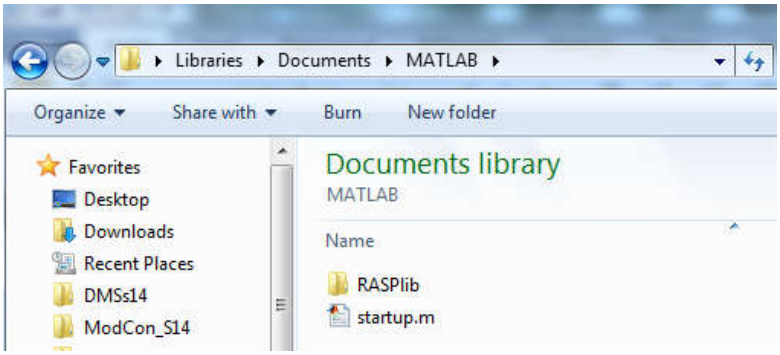
RENSSELAER MECHATRONICS
RASPLIB INSTALLATION INSTRUCTIONS 2015A

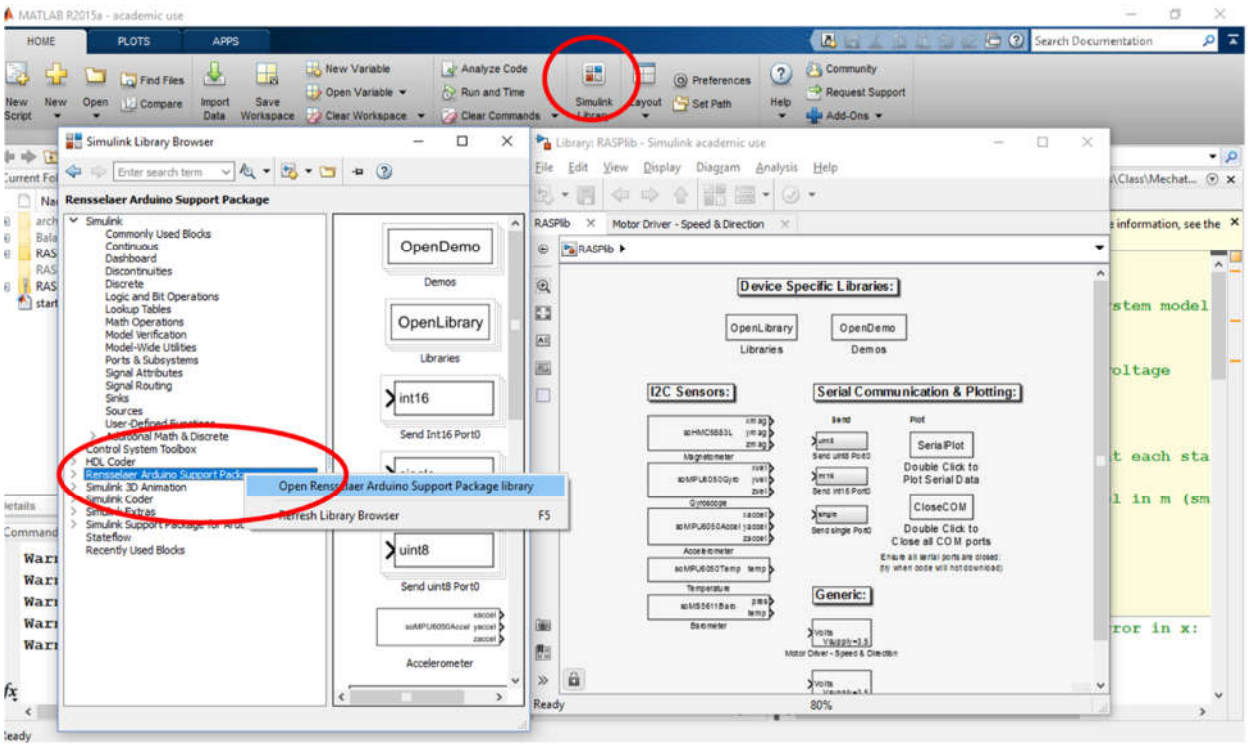
Rensselaer Arduino Support Package - RASPlib installation Instructions 2015a:

Prerequisite: MATLAB/Simulink 2015a and Arduino Support package for Simulink has been installed.

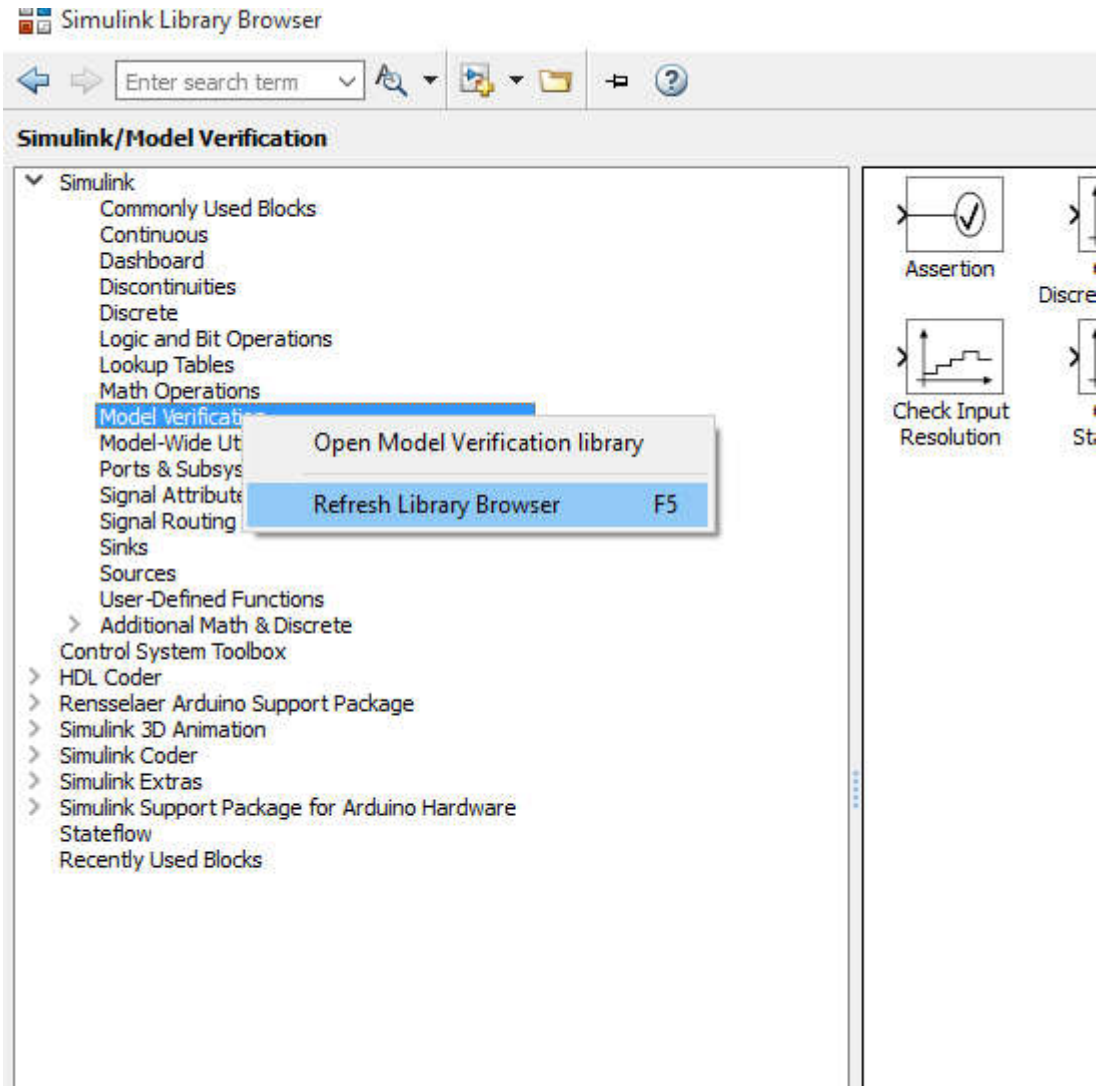
1. Unzip the contents and copy the "RASPlib" folder and 'startup.m' file to your home Matlab directory, for example C:\Users\hurstj\Documents\MATLAB\RASPlib (**NOT** the installation directory, e.g C:\Program Files (x86)\MATLAB):



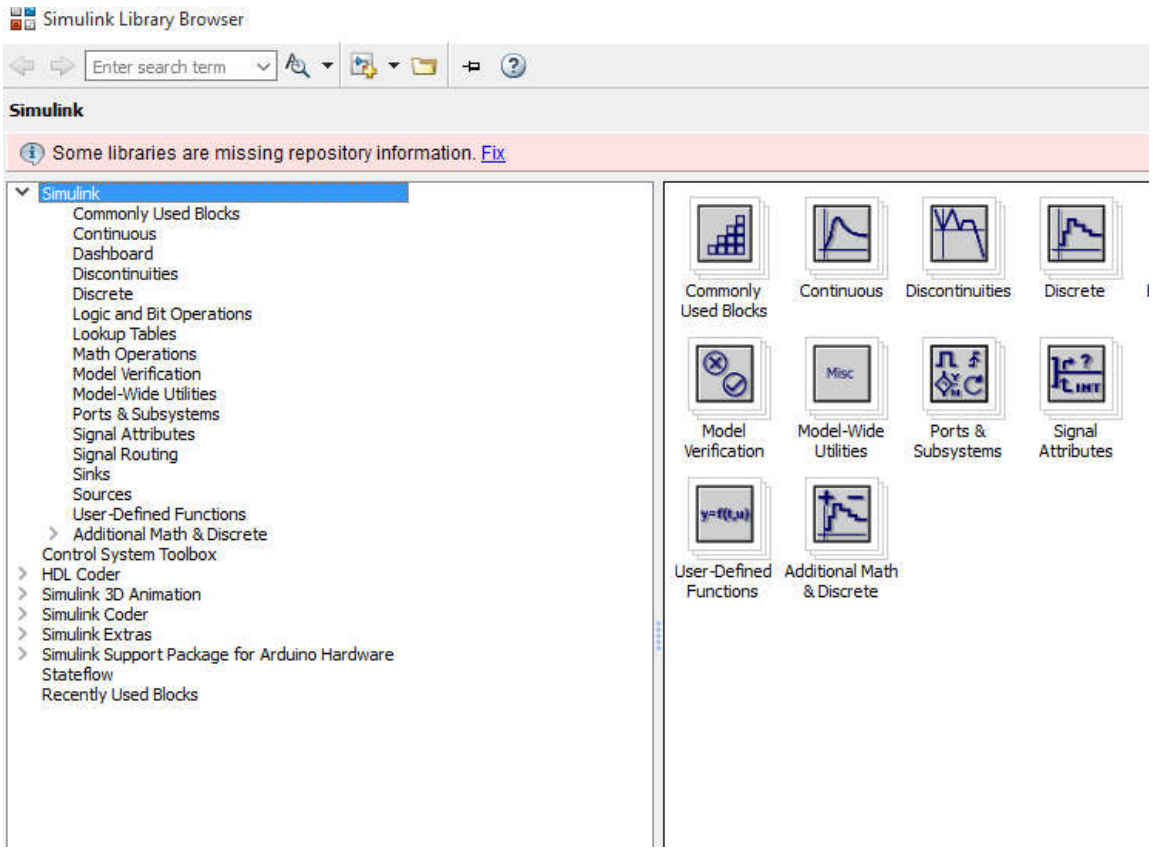
2. Open Matlab, open the Simulink Library, then Right-Click "Rensselaer Arduino Support Package" and select "Open Rensselaer Arduino Support Package".
    - If you do not see "Rensselaer Arduino Support Package" see the steps below.



Simulink may require you to update the library information. In the pane on the left hand side (shown below) right click and select “Refresh Library Browser”. (Depending on your version the actual blocks in the library may look different).

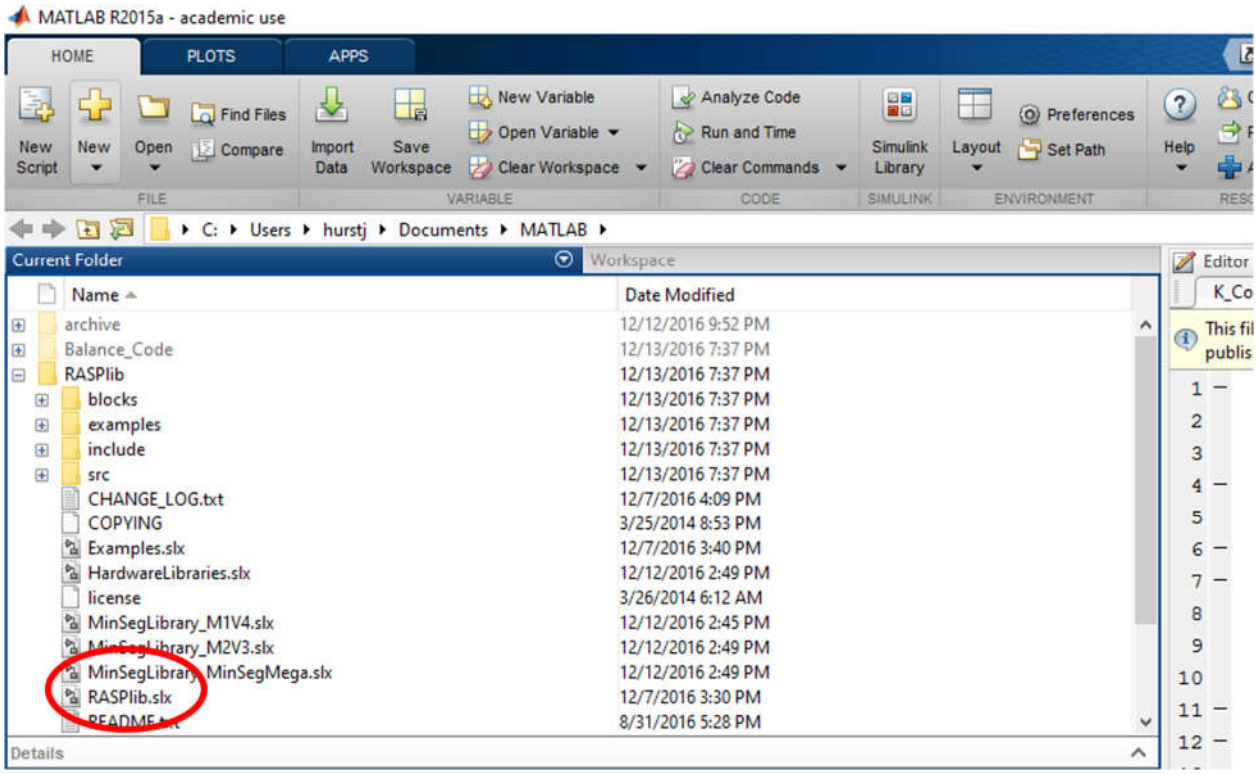


It should indicate you need to “fix”:

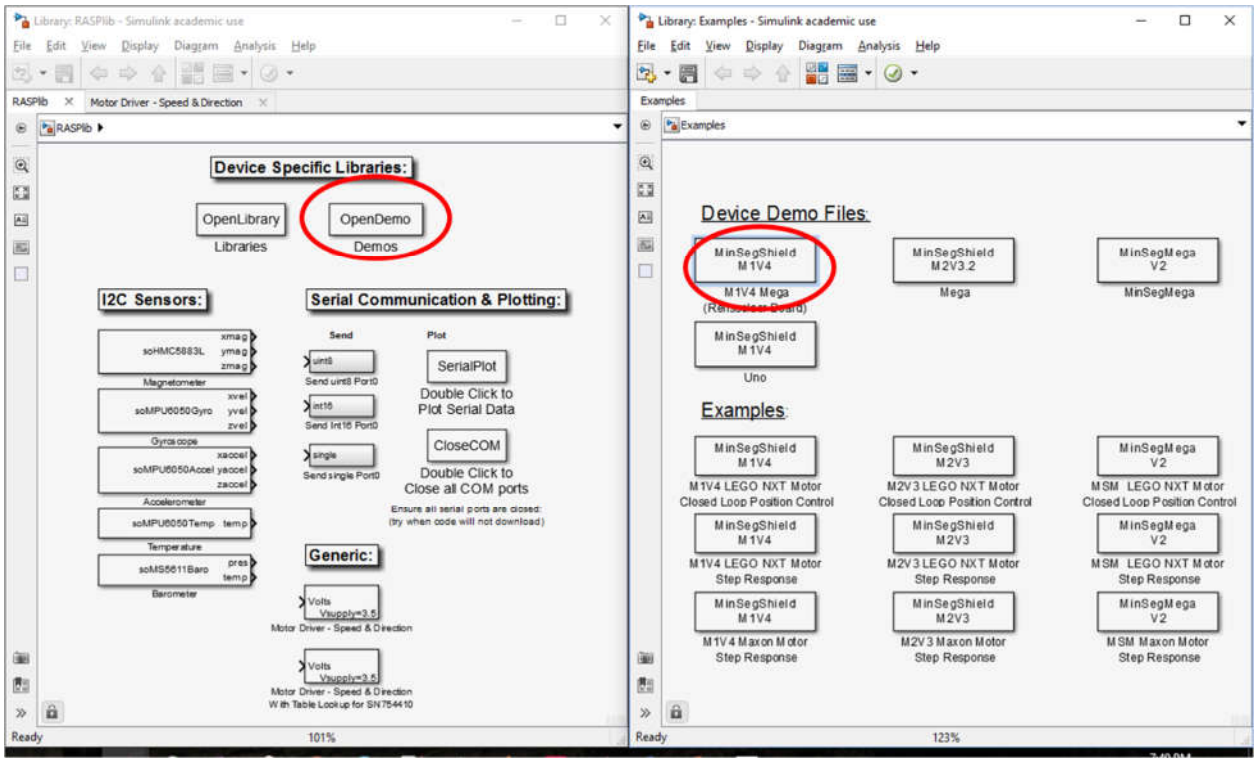


If “Rensselaer Arduino Support Package” is missing then click “Fix” and then select the default option. Now you can right click and open the library.

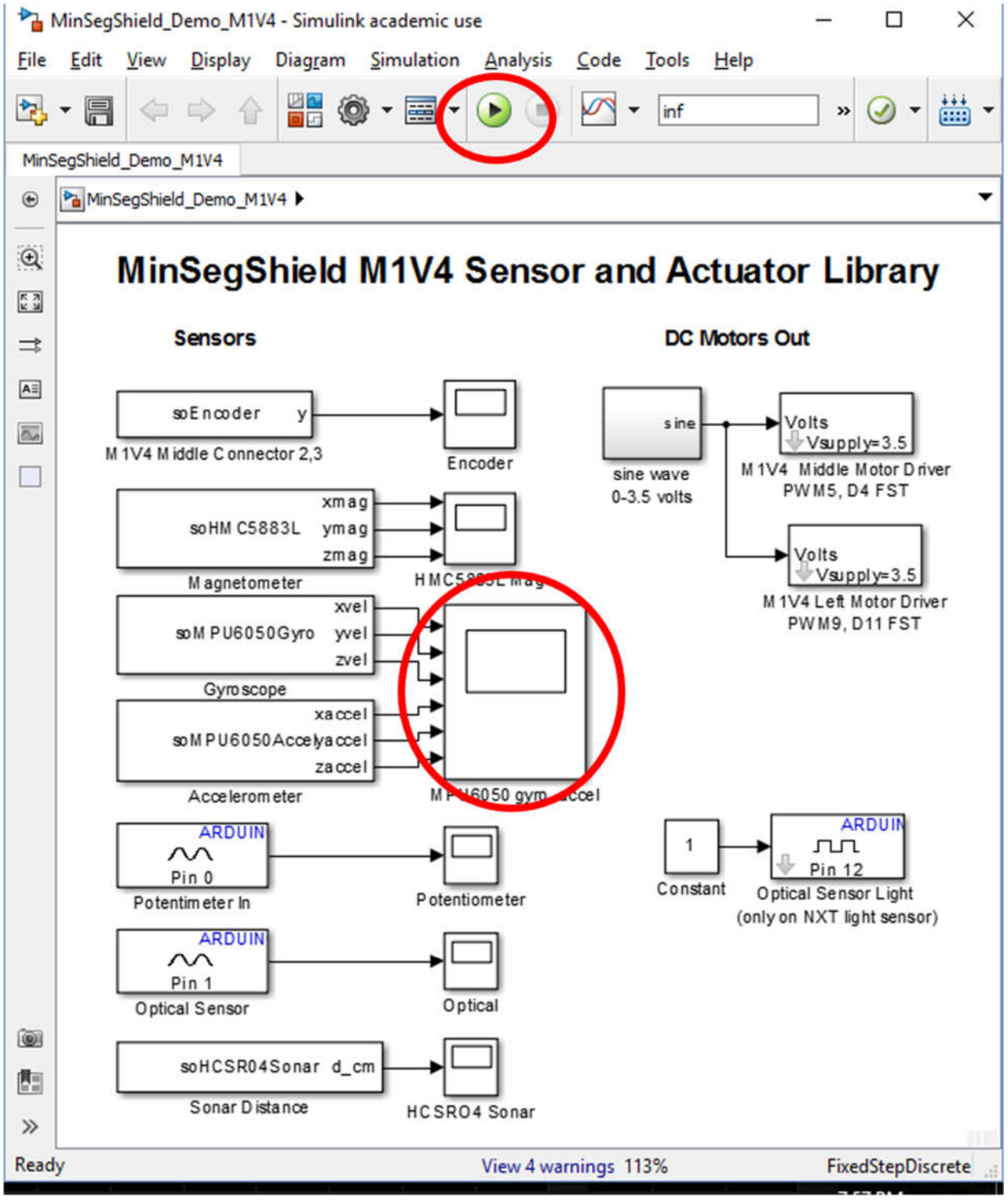
You Can also Open RASPLib from the MATLAB file browser:



3. Open the demo file for your particular hardware (if you have a generic hardware setup you can create a Simulink example using the one of the available blocks in the main library or adopt any of the provided device specific libraries blocks using the indicated pins). **The Mechatronics board at RPI is M1V4**. You can also open examples directly from the "examples" folder in "RASPlib" folder.



- After opening the Demo save it to your home directory with “save-as”. From now on you can create Simulink diagrams in any location and just drag the blocks from the library since Matlab knows where all the necessary library files are.
- Right clock in the demo file and select “Model Configuration Parameters” to specify your COM port and setup the hardware.
- Run the demo on the hardware by clicking the green ‘play’ button



You can view the outputs of the sensors by double clicking scope, and if any motors are hooked up they should begin to move back and forth.