

Osmium MIMU22BT

Plotting Real-time Tracking Data Using USB

Instruction Manual

Revision 1.3

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Revision History

Revision	Revision Date	Updates
1.0	22 May 2014	Initial Release of Instruction Manual
1.1	05 Sep 2014	Included live demo video Modified instructions as per demo video
1.2	15 Sep 2014	Updated video link
1.3	10 Oct 2014	Updated video link

Purpose & Scope

This document lists down instructions to plot tracking data of Osmium MIMU22BT in real-time, using USB.

Hardware & Software Requirement

- Operating System: 64-bits Windows 7
- Matlab R2013
- Matlab scripts for data collection (Should be available on your computer.)
- Hardware: A computer with 4 GB SRAM
- USB data cable
- Osmium MIMU22BT

Live Demo Video with Operating Instructions

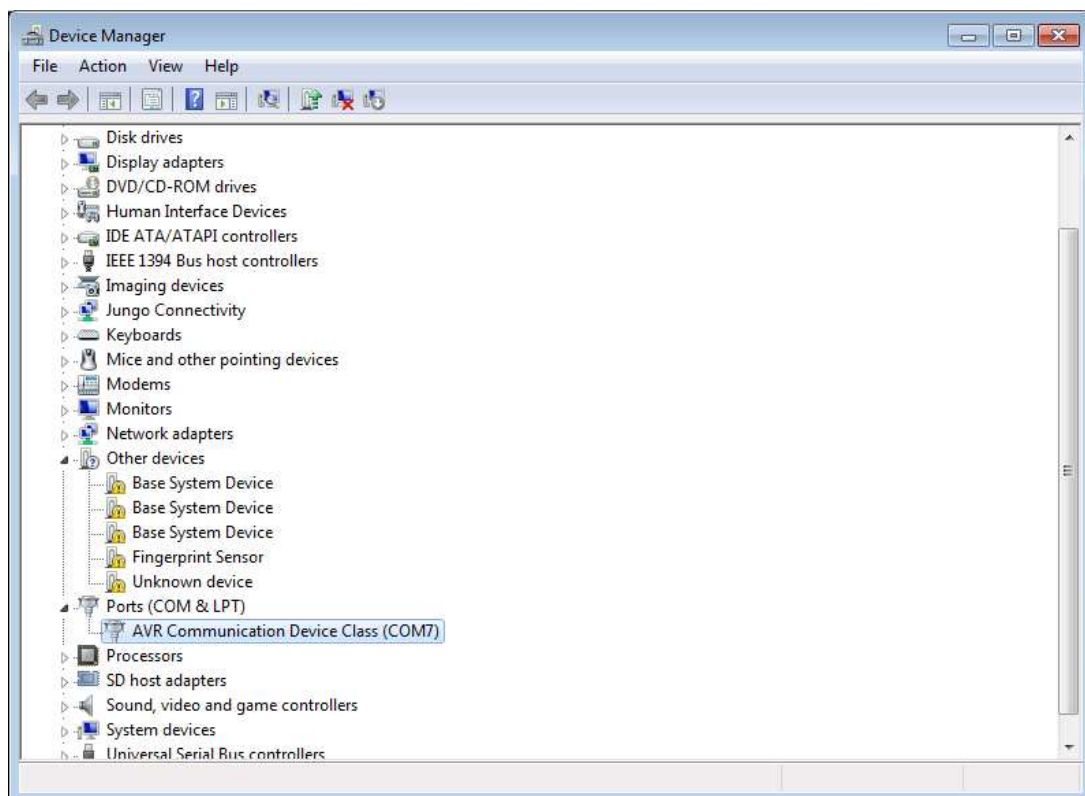
A (quick and dirty) live video is available online:

<https://www.youtube.com/watch?v=s0azCxknWgg>

Same instructions are listed in the following section.

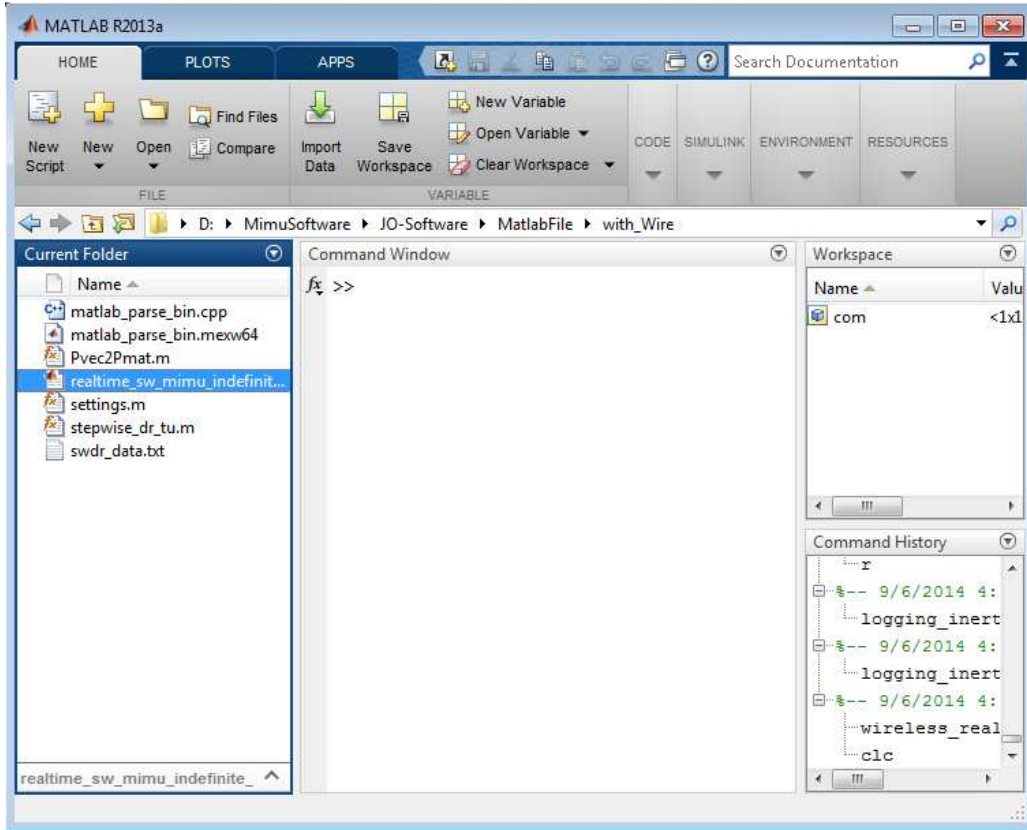
Operating Instructions

1. Power ON Osmium MIMU22BT by sliding power switch to right hand side.
2. Connect MIMU22BT with computer using USB data cable.
3. Open “Device Manager”

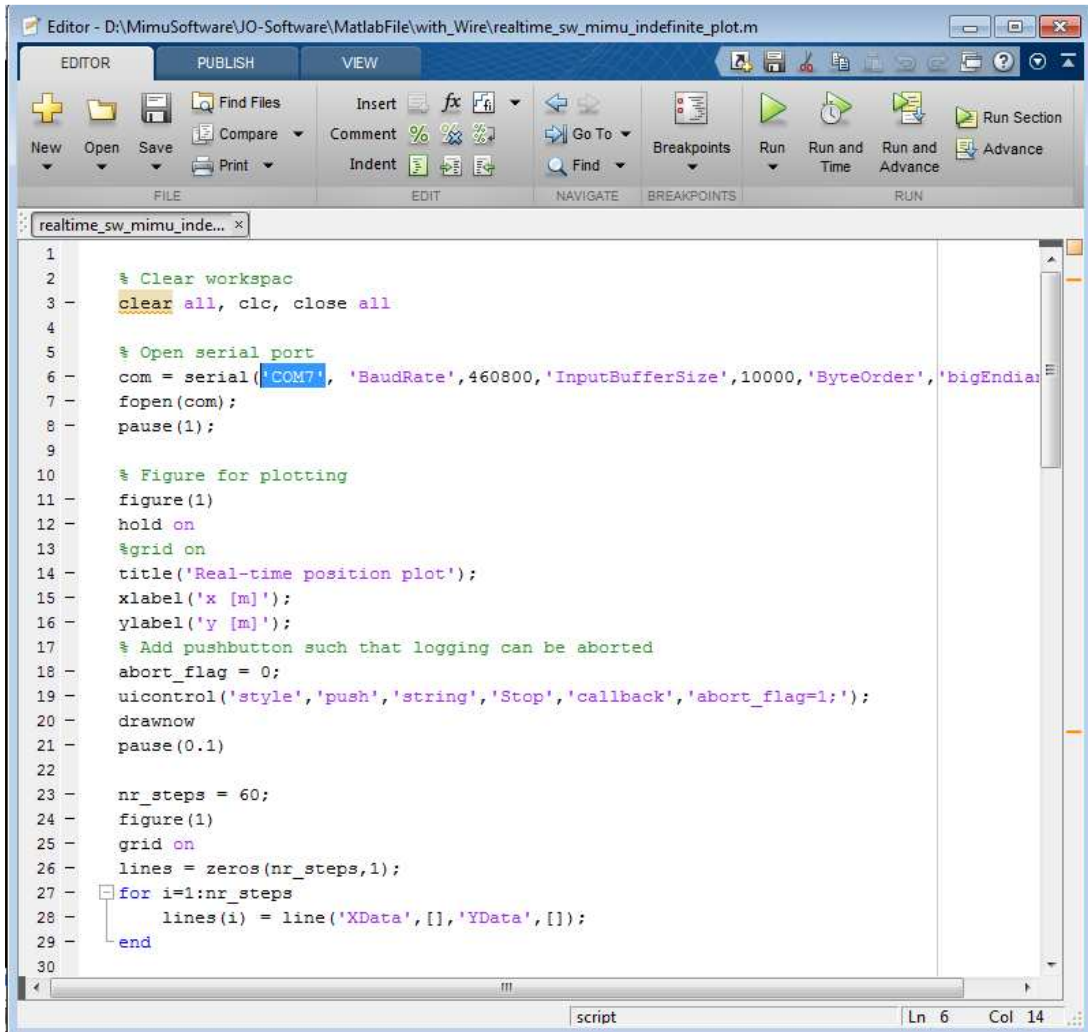


Note the connected COM Port as highlighted in the image above (COM7 in this case). *If you are unable to find the COM port for MIMU22BT, check its power status (ON/OFF).*

4. Open Matlab and select **logging_inertial_data3.m** for viewing

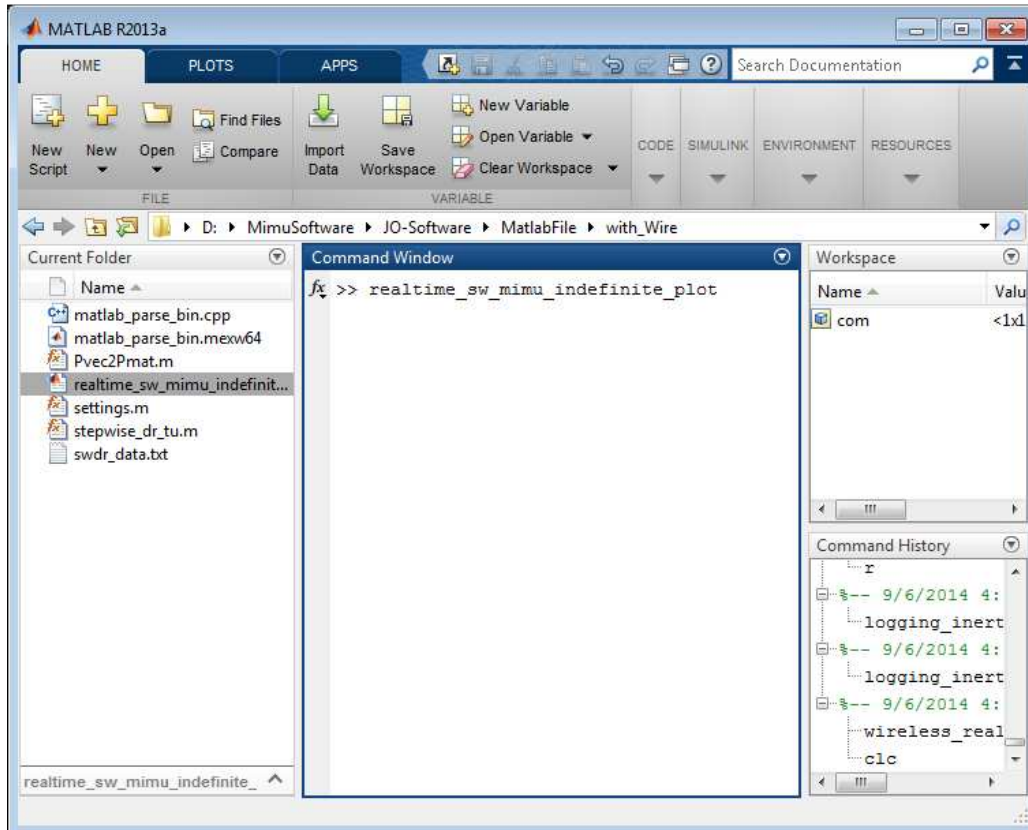


5. Update COM Port in the realtime_sw_mimu_indefinite_plot.m file and save

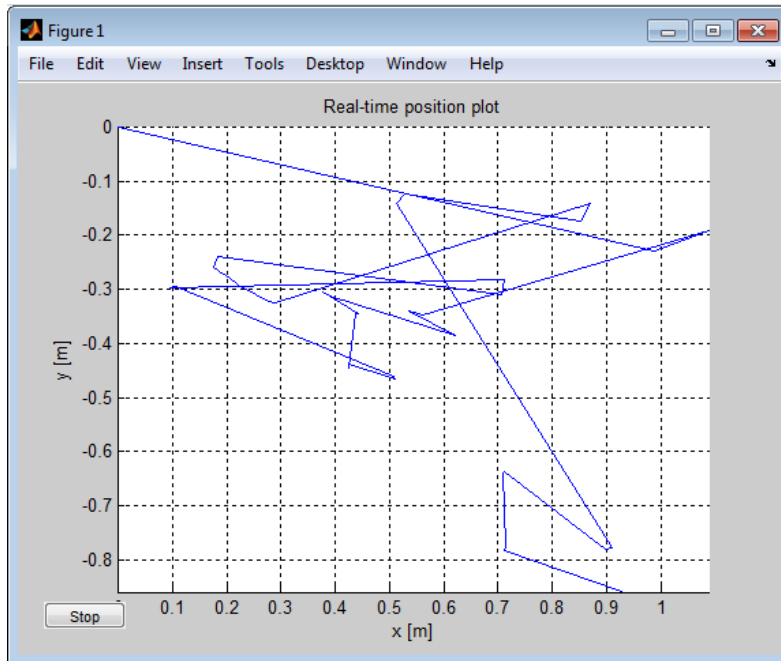


```
1
2   % Clear workspace
3   clear all, clc, close all
4
5   % Open serial port
6   com = serial('COM7', 'BaudRate', 460800, 'InputBufferSize', 10000, 'ByteOrder', 'bigEndi...
7   fopen(com);
8   pause(1);
9
10  % Figure for plotting
11  figure(1)
12  hold on
13  %grid on
14  title('Real-time position plot');
15  xlabel('x [m]');
16  ylabel('y [m]');
17  % Add pushbutton such that logging can be aborted
18  abort_flag = 0;
19  uicontrol('style','push','string','Stop','callback','abort_flag=1;');
20  drawnow
21  pause(0.1)
22
23  nr_steps = 60;
24  figure(1)
25  grid on
26  lines = zeros(nr_steps,1);
27  for i=1:nr_steps
28      lines(i) = line('XData', [], 'YData', []);
29  end
30
```

6. Run `realtime_sw_mimu_indefinite_plot` from Matlab command prompt



7. A Matlab plot will pop up, showing the realtime tracked path of MIMU22BT. Below is the movement of MIMU22BT randomly on work table:



Note:

- *Please restart Matlab, if it gives communication error.*