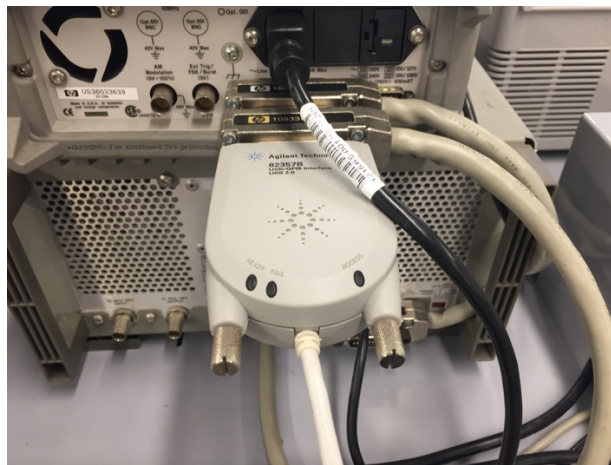# Instruction for Using code *usbwritefunc*

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Install ***Keysight IO Libraries Suite*** from the link down below:
https://www.keysight.com/en/pd-1985909/io-libraries-suite?cc=US&lc=eng

Turn on the ***33120A Arbitrary Waveform Generator***, and connect the ***GPIB*** cable to the back of it;

Use a ***USB 2.0 B-Male to A-Male*** cable to connect the ***USB B-Female connector*** in the front of the table, this connects the Waveform Generator to your PC;

Open ***Keysight Connection Expert***, reload and wait, you will be able to find the 33120A Waveform Generator on the list in the left, click it and you will see the ***VISA Address*** of it, copy the VISA Address, and the ***Ready*** should be light up ***green*** on the ***GPIB connector*** in the back;

*If you are not able to find the Generator on the list, there might be some connecting issues. Go to ***Tech Office*** and borrow a ***GPIB to USB*** cable. Connect the GPIB connector to the back of the Generator, and the USB connector ***directly*** to your PC, reload, then you should be able to find the generator on your list;
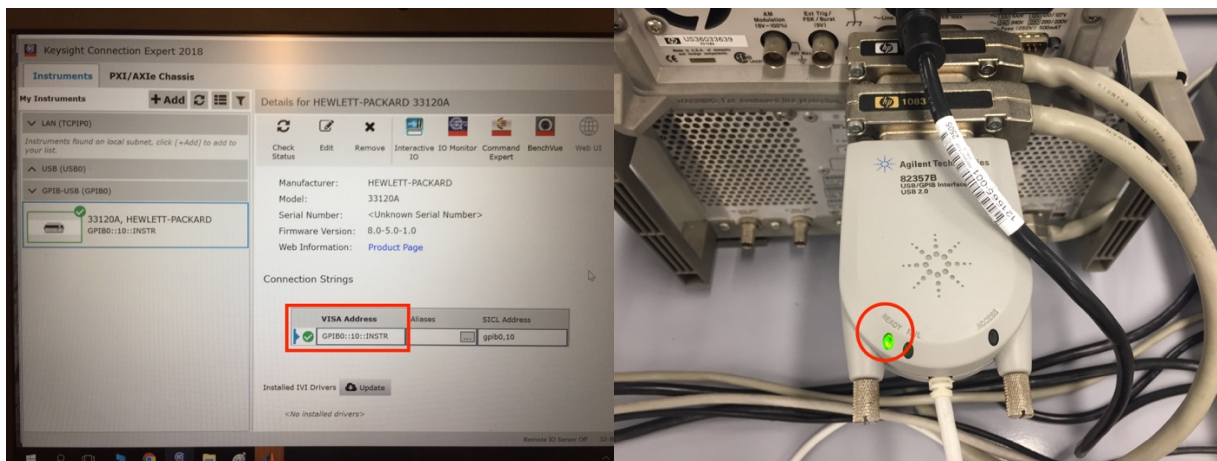

Switch the Generator into ***Arbitrary mode*** by pushing the Arb button, use a ***BNC Male to BNC Male*** cable to connect the output of the Generator to the Oscilloscope;
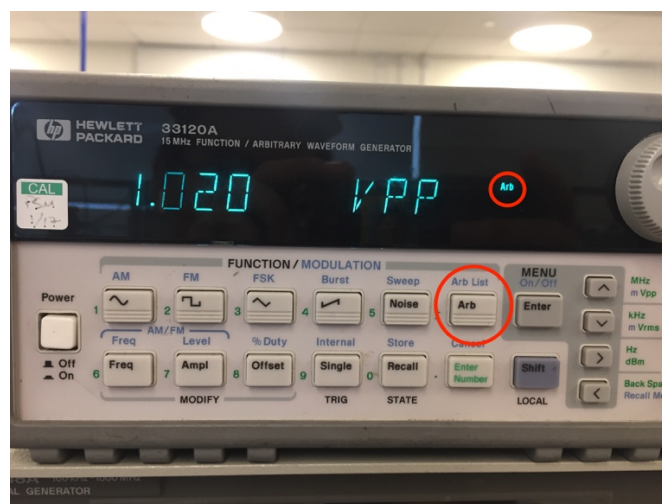
Load the ***usbwritefunc*** into your Matlab, try to test if the function works by using the code below:

t=0:1/50:1;
y=sin(2*pi*t);
plot(t,y);
usbwritefunc('PASTE THE VISA ADDRESS HERE',y);

If everything is connected correctly, you should be able to hear a ***Ding*** from the Generator and the Oscilloscope should show a dotted sine wave on the screen, this means the function has successfully loaded the arbitrary signal into the Gengrator;
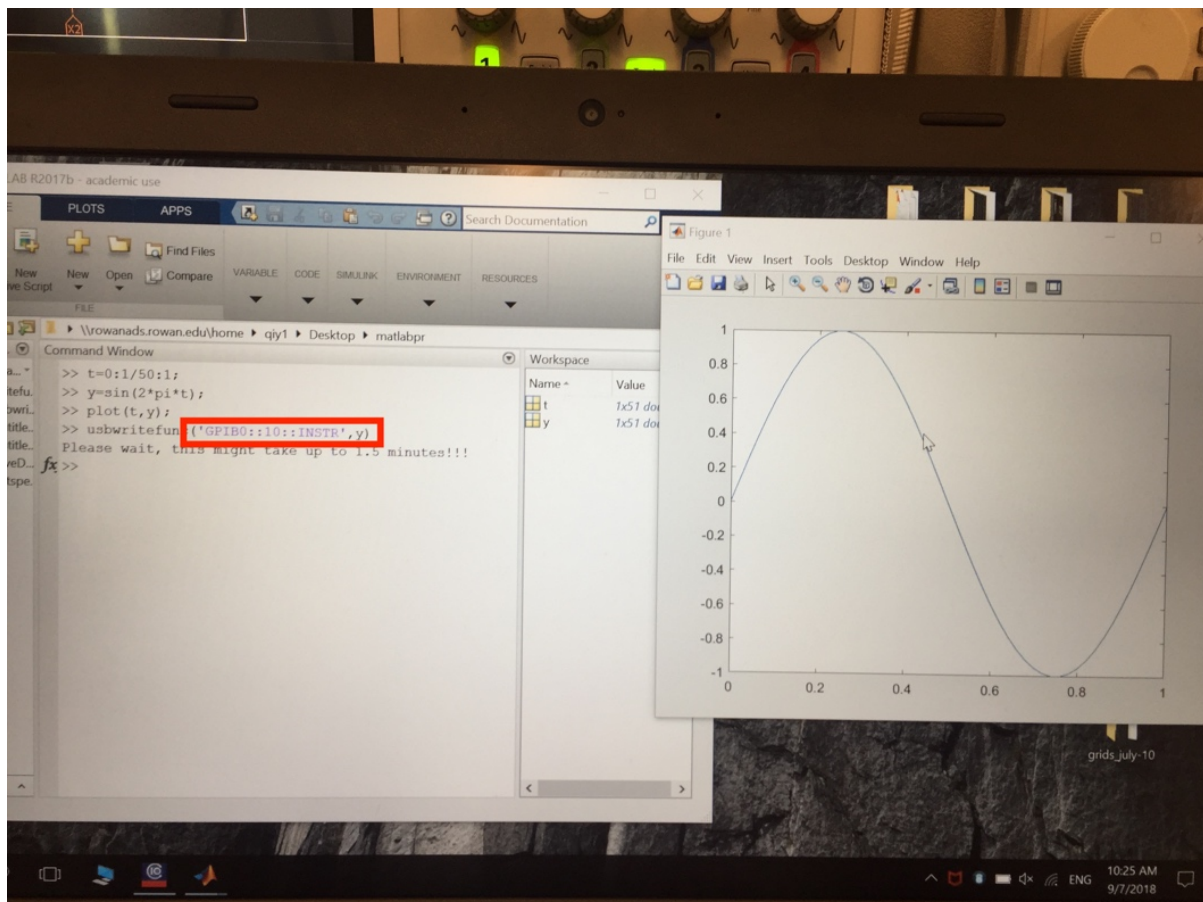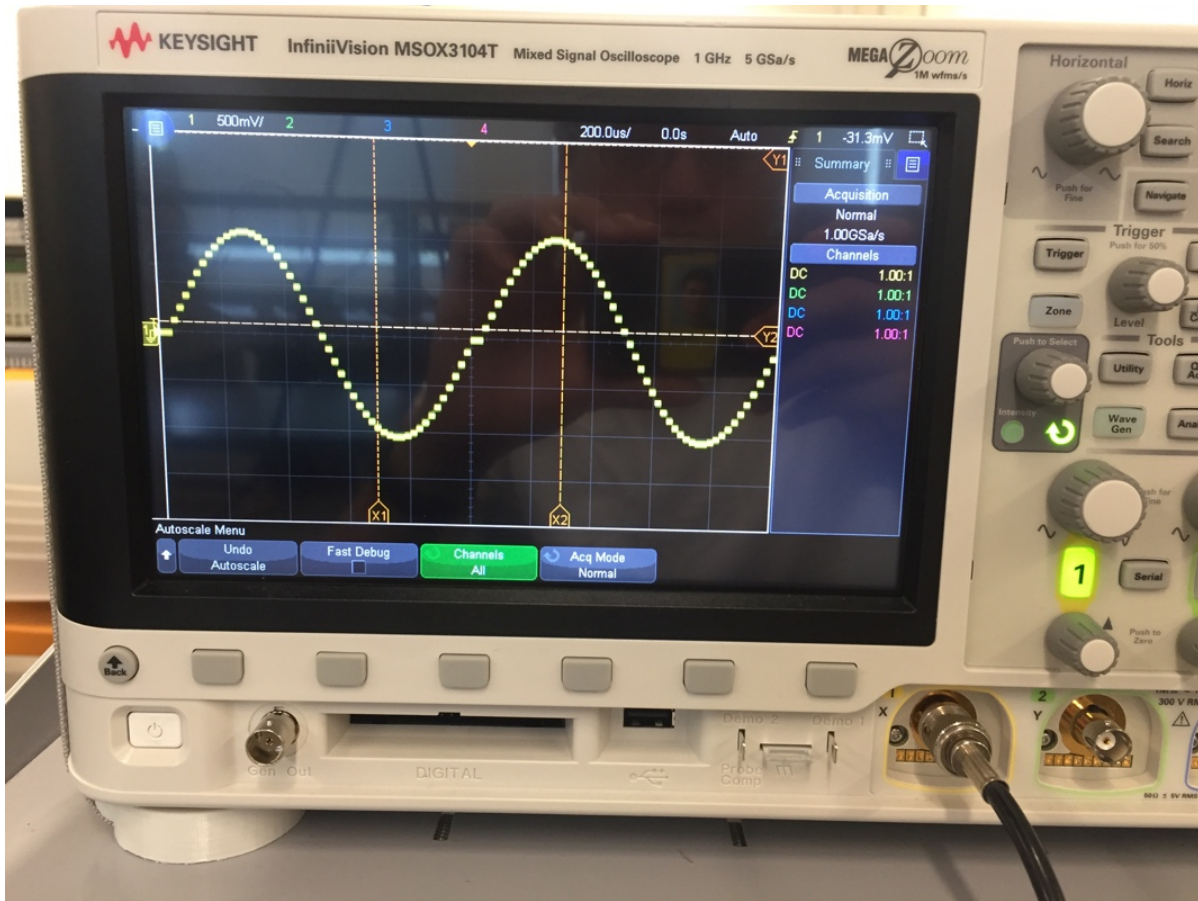
*You can also switch the data in the ***usbwritefunc*** to change data, amplitude, frequency, and offset of it, the detailed information is written in the explanation part of the code, you can check it out in the ***Matlab Editor***.