# Frank Martino - Q2.1 Experimental Measurements and Personal Instrumentation

Prove your skill set using ONE of the following: M1K board, Analog Discovery Board, or M2K board.

## Q2.1 Function Generator: create a DC, sinusoid, and pulsed signal

I can use my instrumentation board's function generator to create a DC, sinusoid, and pulsed signal and measure with its oscilloscope directly.

I first used two jumper cables to connect AIN to Channel A ports and BIN to Channel B ports to look like the image below.
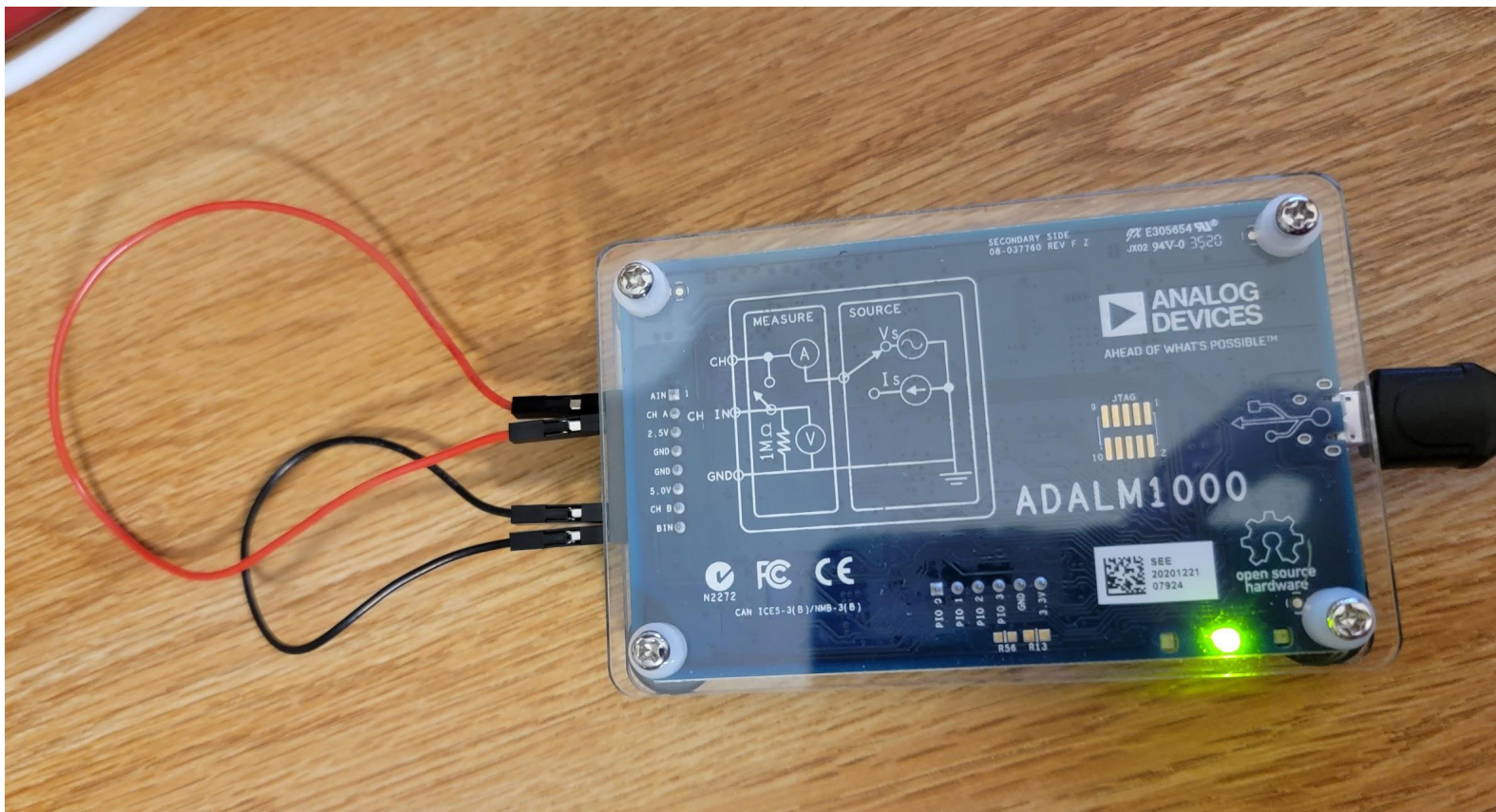
When setting up the AWG Channel A, I set it to the minimum 0.0 volts, the maximum 5.0 volts, the frequency 1000.0 Hz, and the rest of the settings remained as default. When setting up the AWG Channel B, I set it to the minimum 1.0 volts, the maximum 3.0 volts, the frequency 100.0 Hz, and the rest of the settings remained as default. (x-axis and y-axis stretched to allow for easier reading, and line thickness increased to 3 pixels on all graphs presented below)

Once the board was all set up I plugged it into the USB port on the laptop and opened the ALICE desktop software and changed the settings to create a DC signal. This DC signal is represented by the green line below and appears to be a straight line.
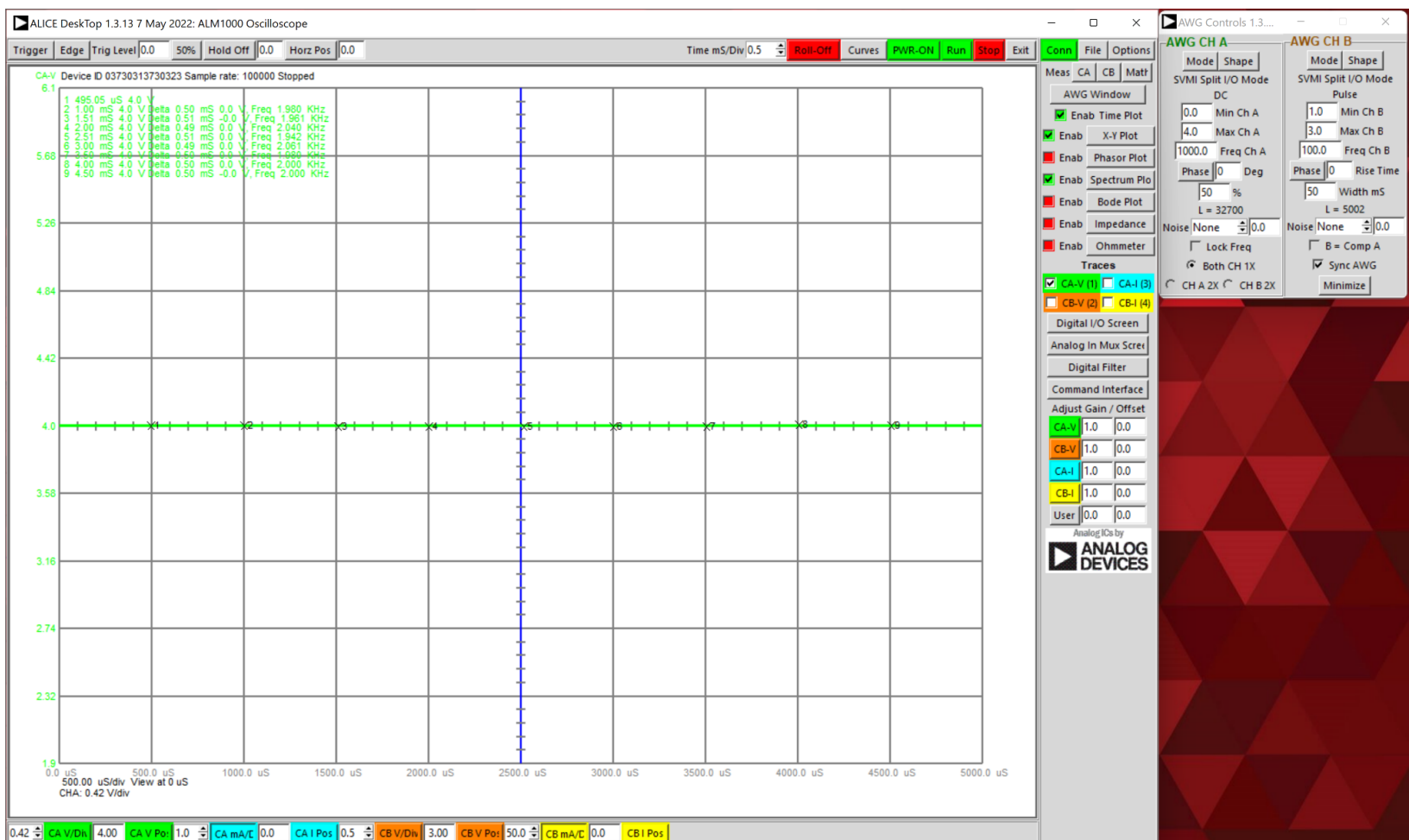
Next, I changed the settings to a sinusoidal pulse signal with the same settings mentioned above and created a graph that continuously goes from 0.0 volts to 4.0 volts every 500uS seconds.
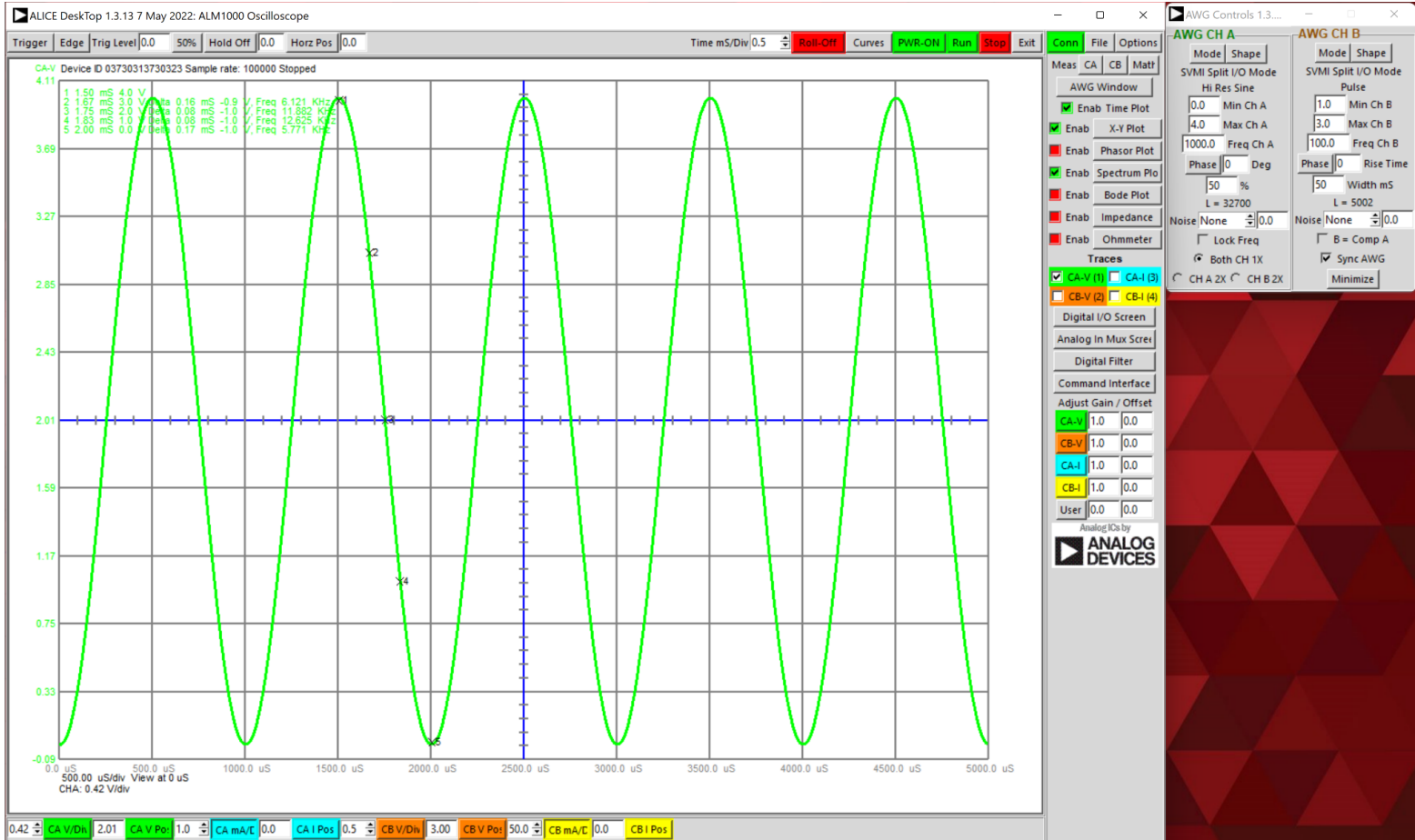
Lastly, I used the pulsed setting in the B Channel which created the orange graph shown below which has 3.0 volts at time 0.0 uS but suddenly drops to 1.2 volts and back up to 3.0 volts where it appears to remain.