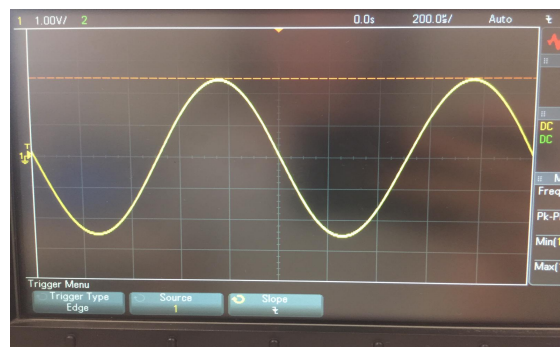
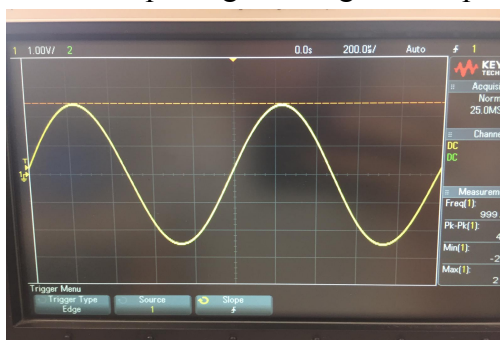


1. Use the compensation signal of the oscilloscope and compensate your probes as explained in the above mentioned documents and tutorials. Explain in your report how you compensated your probes.

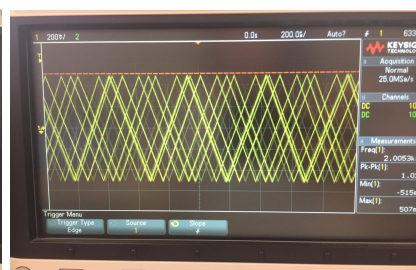
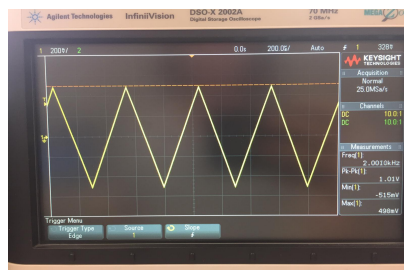
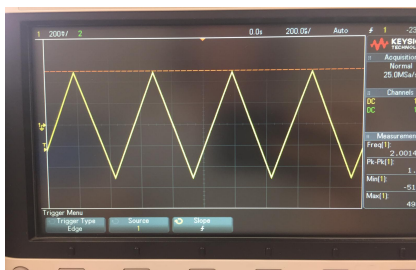
I connected my probe to the compensation comp and the ground then I pressed the Auto scale button then I used my key on the probe to compensate it. After this I could see clear corners on the compensation wave.



2. Using a signal generator apply a 5 Vp-p sinusoidal signal having a frequency of 1 kHz (Note that this signal should not have a DC component). First use positive edge triggering and draw what you see on the screen, then apply negative edge triggering and draw the corresponding figure. Explain the differences, in your report.
On positive edge mode it starts capturing on a positive slope but on negative edge mode it starts capturing on a negative slope.

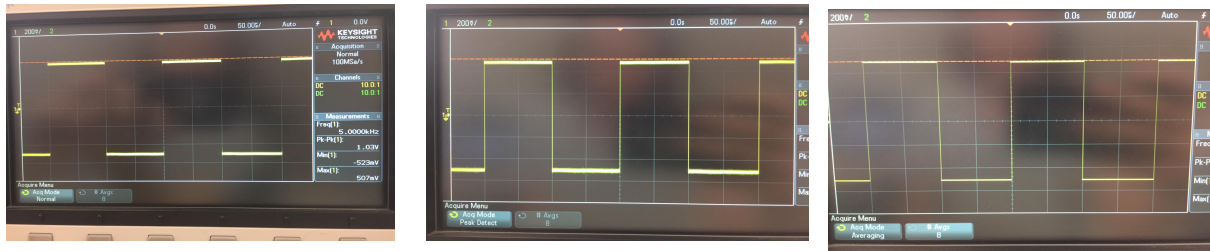


3. Apply 1 Vp-p 2 kHz triangular wave to the scope. Observe the effect of turning the trigger level knob on the oscilloscope, comment on your observations using triggering concept. Turning the trigger level knob on the oscilloscope changes where the trigger point is so it changes where we start capturing the picture of the wave. If turn it too much we can stop taking a proper picture of the wave.

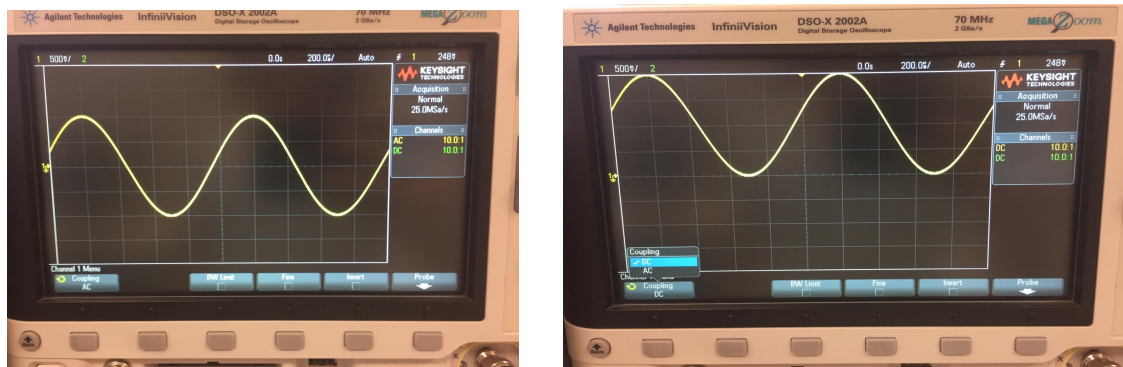


4. Apply 1 Vp-p 5 kHz square wave to channel 1 of the oscilloscope. Then try all of the acquisition modes (sample, peak detect, and average) and write down your observations including graphs.
Sample detect is the normal mode it shows a not high quality graph. In peak detect mode even

though it doesn't show a higher quality graph it captured the movements of the wave better. Average mode gave the best result as it both captured the movement of the wave and gave a high resolution graph with minimal noise.



5. Generate a sinusoidal signal with 2 Vp-p amplitude and 1 kHz frequency. Also apply a DC offset of 1 V. First, use DC coupling and draw what you see, then use AC coupling and draw the corresponding waveform. Comment on the differences. On DC coupling it captures everything both the DC and AC signal on AC coupling it only captures the AC signal.



6. Setup the following circuit on your breadboard:
Apply 2 Vp-p 1 kHz sinusoidal signal as the X signal and, observe and draw X and Y voltage waveforms. Apply a DC-Offset of 0 V. Use channel 1 for the X signal and channel 2 for the Y signal. You should use channel 1 as the trigger source. Measure delay and phase difference between X and Y signals. Then change the frequency to 100 Hz and repeat the above steps. Comment on the differences.
On 100Hz delay was 1.62ms and phase difference was 58 degrees. On 1000Hz delay was 0.032ms and phase difference was 11.52 degrees also there was a greater difference in amplitude on 100Hz

