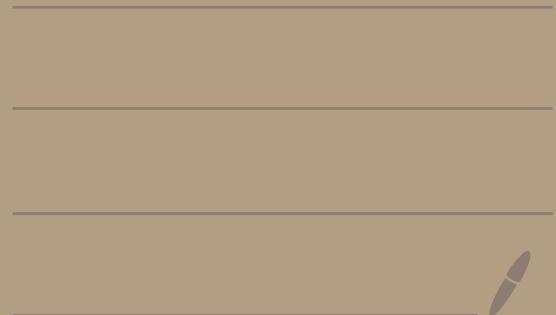


How to send Signals

to AWG.



Files

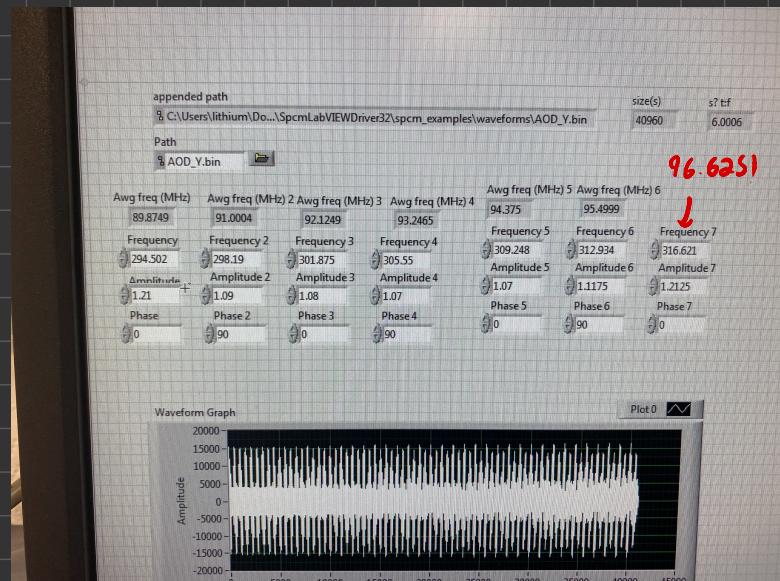
In habview; You're going to first need two files:

- WaveformGeneration.vi : Creating our multitone signal
- M4-DA-Std-FromBinaryFile.vi : Translate the signal to set to AWG

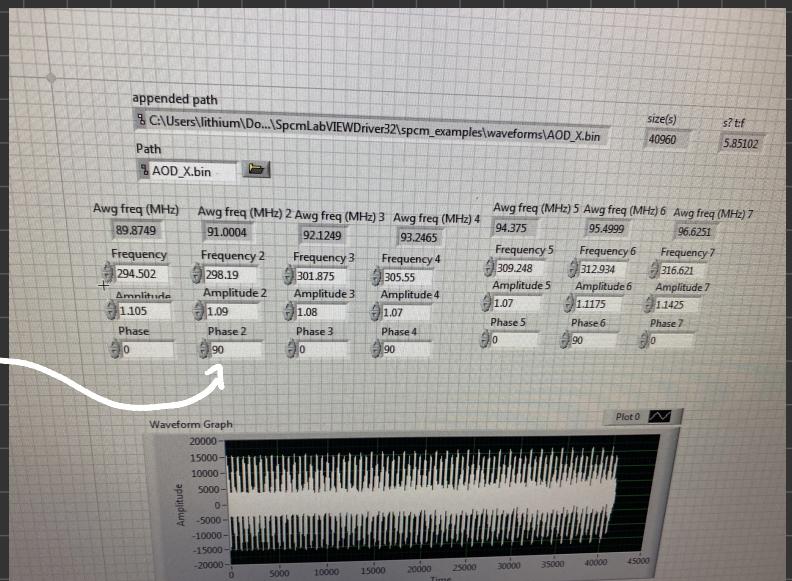
- For controlling the horizontal AOD, I used the name "AOD-x"
- For controlling the vertical; I used "AOD-y"

Frequencies / Amplitudes Used

AOD-y:



AOD-X:



Phases were set to reduce interference in between peaks.

Rewriting:

Both AOD_x & AOD_y have the same frequencies, but amplitudes can be different.

Labview file
scales input to
a corresponding
frequencies.

Input Frequencies (MHz)

→ (Controlled Values)

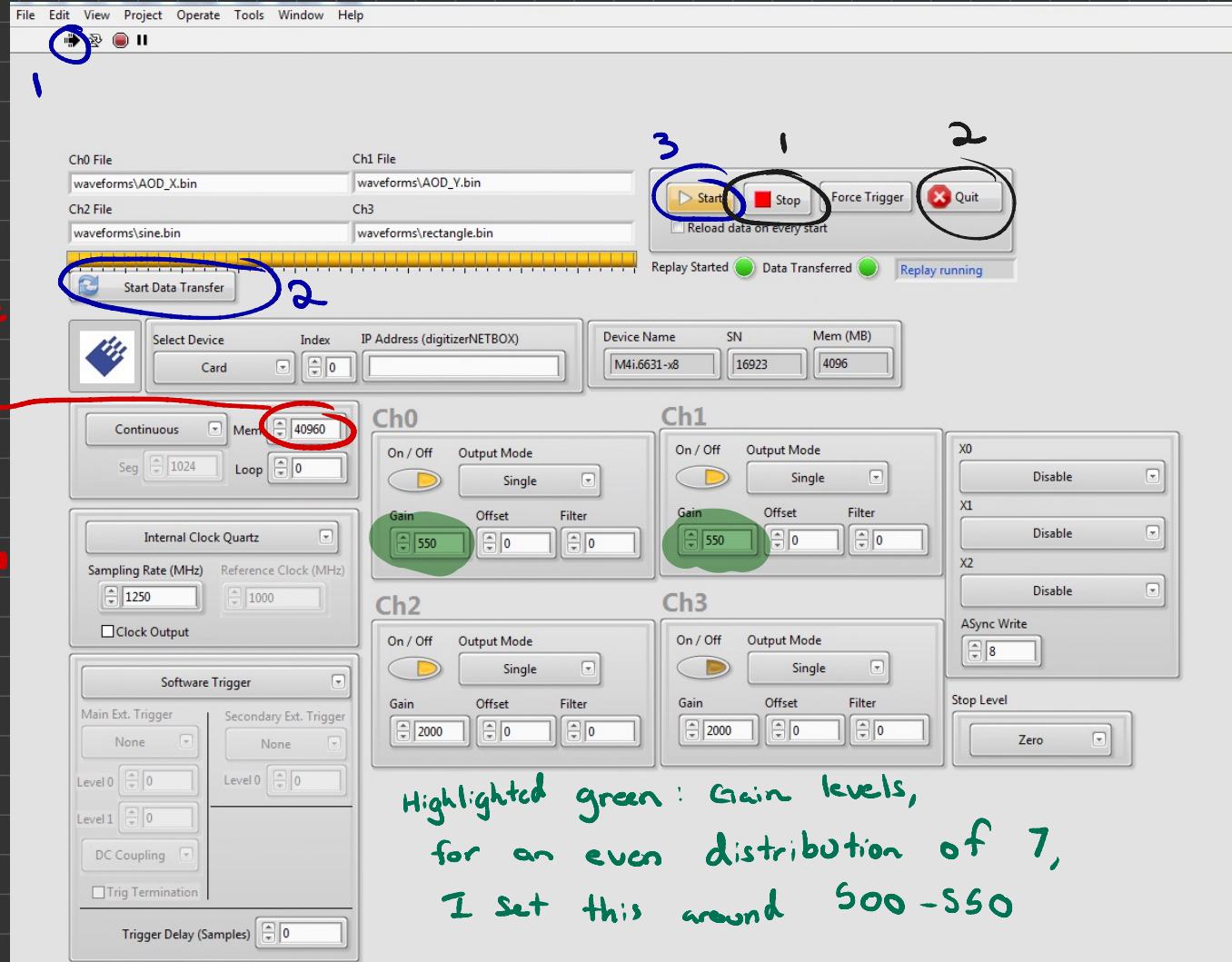
	89.8749 (294.502)	91.004 (298.19)	92.1249 (301.875)	93.2465 (305.55)	94.375 (309.248)	95.4999 (312.934)	96.6251 (316.621)
Amplitudes AOD_x	1.105	1.09	1.08	1.07	1.07	1.1175	1.1425
AOD_y	1.21	1.09	1.08	1.07	1.07	1.1175	1.2125

Notes:

- For figuring out the amplitudes, I didn't have an exact formula; I would adjust the amplitude of a beam, and then check on a camera how the profiles appeared. repeat this process until the beams look similar.

- For more control of your frequencies, scale up your memory by orders of 10 from 4096

Uploading to AWG



Starting Sequence

With the correct files, follow the blue arrows.

- Ch1 is for the second AOD,

- Ch0 is for the first AOD

Stopping Sequence

1.) Follow the circles in black.

2.) If you press the red hexagon by the black arrow on top left, restart labview.