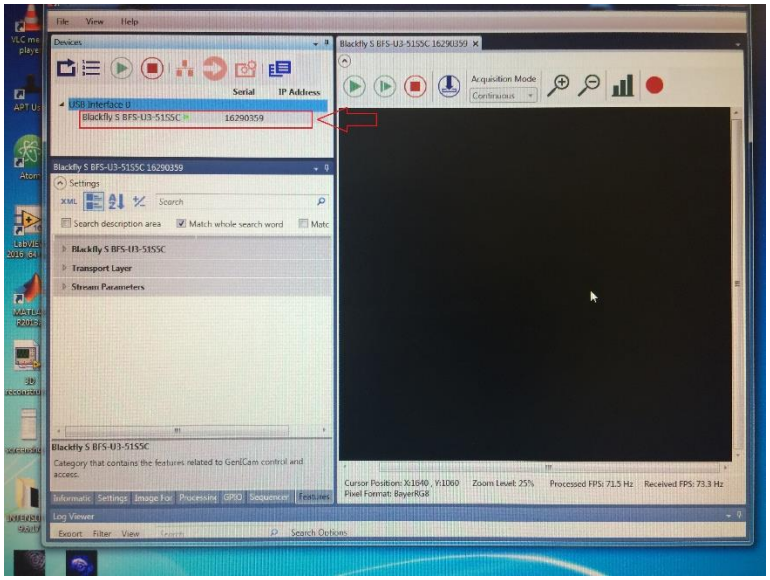
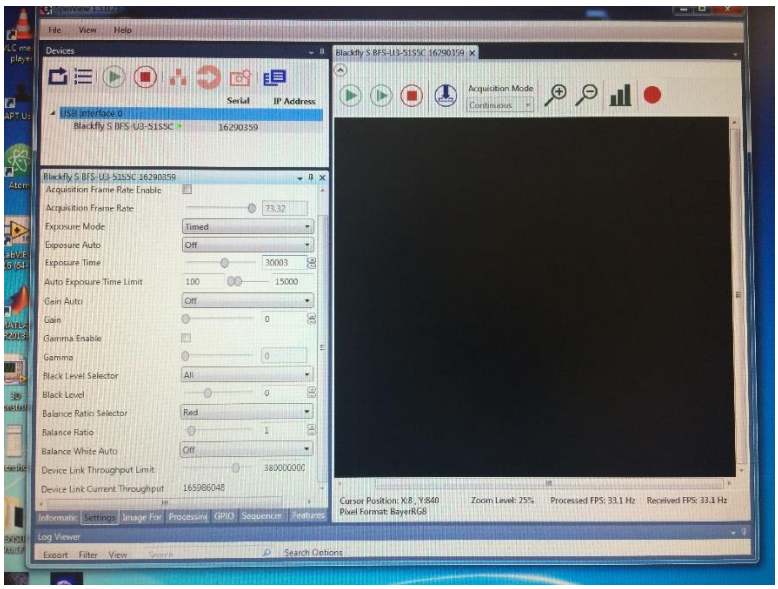
Procedure

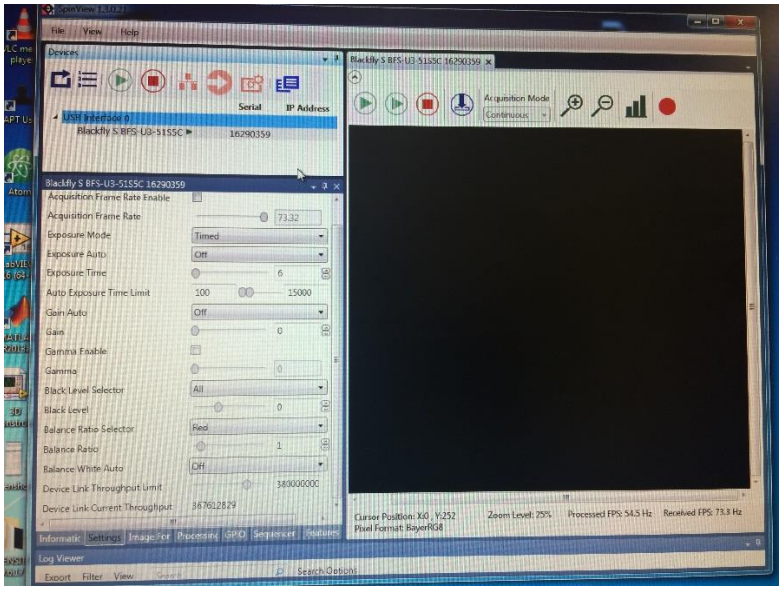
1. Screw the metal posts into the surface tightly such that the tank can be placed upon them.
2. Channel one of the wave form generator show now be connected to the laser by connecting the outer rim of laser to negative node node and inner rim to the positive node.
3. Place the dielectric mirror between the holders facing the laser.
4. Place a piece of paper on the top surface of the di-electrical mirror to help with aligning the laser beam.
5. Turn on the beam using the waveform generator and direct it onto the mirror. Move the laser until the beam is in the centre of the paper.
6. Put the tank on top of the metal posts and pour Triton x-100 slowly until almost full.
7. Put the transducer on top of the transducer holder in the XYZ stage being used for the transducer and lower until the top surface of the transducer is just below the surface of the Triton x-100 liquid.
8. Connect the camera to the USB of the computer and turn on the Spinview software.
9. Bring the camera closer to the top surface of the liquid until the top surface of liquid and the camera are approximately 6cm (focal length of camera) apart.
10. Double click on the device that we have connected in the top left corner of Spinview as shown in the picture below.



11. Set the specifications in Spinview as shown in the picture below.



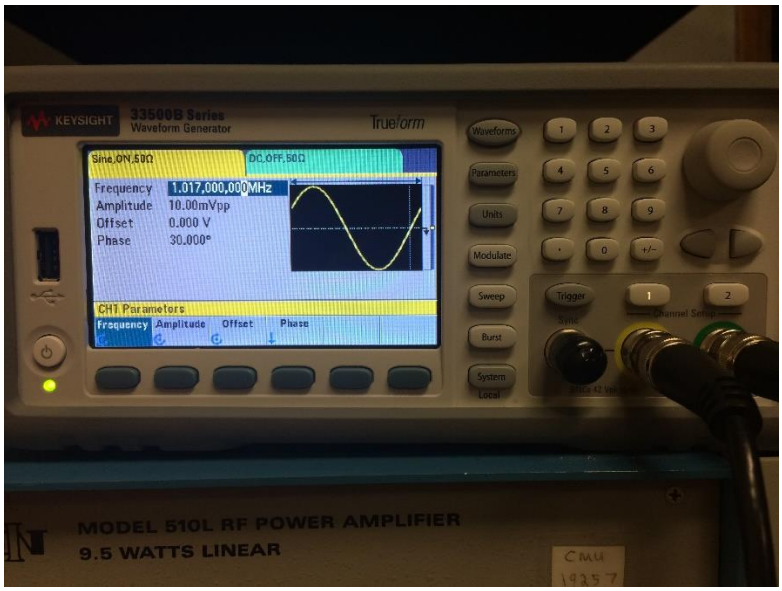
12. Focus out on the image being seen in Spinview.
13. Shine a torch onto the top surface of transducer.
14. Use the digital level to make sure the camera is at 90 degrees to the horizon.
15. Use the camera to focus on the top surface of the transducer until the irregularities in the transducer can be clearly seen in the image in Spinview.
16. Set the specifications in Spinview as shown in the pictures below.



17. Screw an absorptive filter of ND = 3.00 into the cage system of the dielectric mirror. Use a higher filter if needed.
18. Turn on the 1st channel of the Waveform Generator.
19. Make sure Waveform Generator is connected to the Amplifier.

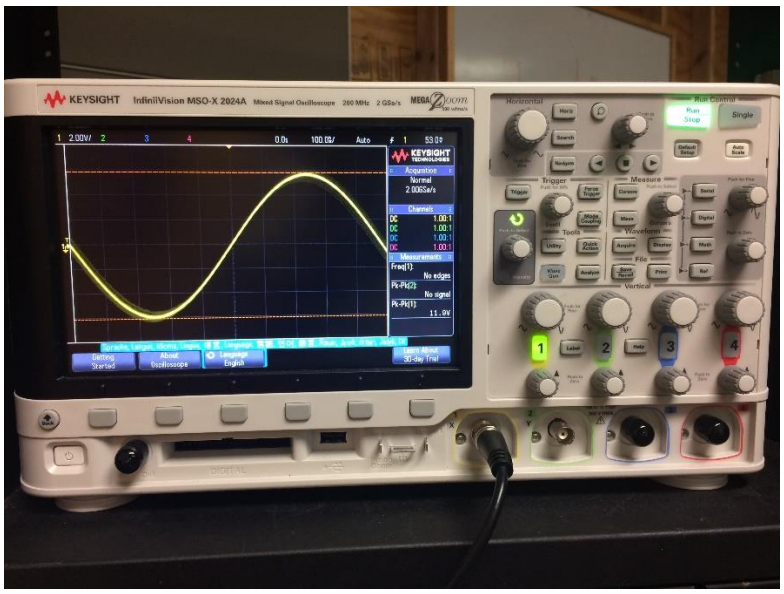
20. Turn on Amplifier and Oscilloscope.

21. Set the initial specifications of the Waveform Generator to those shown in the picture below



22. Change the frequency until you find the resonance frequency by looking at both the waveform on the Oscilloscope and the image in Spinview.

23. Change the voltage in the Waveform Generator until the peak to peak voltage in the oscilloscope outputs a value between 10 and 15 V.



24. If the image in the Spinview does not have concentric circles with the centre clearly seen, move the camera until it outputs such an image.