

Practical Exercise -- 6.163, Strobe Project Lab, Spring 2009

Instructor: Dr. J. Bales (bales@mit.edu)

Background

Your task is to produce one (or more) interesting photographic print(s) of a water balloon bouncing off of a table. Note - the balloon will not be popped, it will simply be dropped from a height of about 1 foot, and then bounce off of the table top. The balloon, we are told, "Goes flat as a pancake" and "Does really cool stuff" during this experiment.

The water balloons will be 4 to 8 inches in diameter. We expect that, even when "as flat as a pancake," they will be no more than 6 to 12 inches in diameter. The strobe is the same as used in Lab 1. It has a BCPS of 40, and the hot spot is approximately 1 foot wide at a distance of two feet.

Process

1. You will attend only 35 minutes of your lab session during the week of February 16. We will send the schedule by email.
2. We will have set out the materials and equipment needed for your selections below.
3. Take the photos you deem necessary to create the deliverables required.

Deliverables

1. Submit a photographic print that allows us to measure the diameter of the balloon when it is essentially at its flattest. You must make this print yourself.
2. Explore the range of motions of the balloon by varying the delay. Submit the highest quality print you can make of your most aesthetically pleasing negative, and your negatives. This print may or may not be the print you produce for #1 above.

List the camera and enlarger settings on the back of your print. If the print (and your notes on the back) are all we need to determine the true diameter, then no additional write up is needed. If you need to give us more information, write that information on a sheet of paper and submit it with your prints.

Pre-lab Due: Email to Dr. Bales & Christina by 5 PM the day before your Practical Exercise

- A) You must choose one of these lenses and state the initial aperture you wish to use.
Lens 1: 28 mm focal length; f/stops of f/16, to f/3.5, minimum working distance of 0.4 meters.
Lens 2: 50 mm focal length; f/stops of f/22 to f/2.8, minimum working distance of 0.45 m.
Lens 3: 200 mm focal length; f/stops from f/32 to f/4, minimum working distance of 0.71 m.
- B) You must choose the color of the balloon, and the tabletop. The background may be the same color as the tabletop, a black curtain, or no background (except the back of the lab).
Balloon: White, Blue, Green, Pink, Gray, Red
Tabletop: White, Black, Red, Orange, Yellow, Blue
Background: Same as tabletop, Black curtain, None.
- C) Describe the position of the strobe and camera relative to each other and to the subject. Include the height of the strobe and camera! You can write it up, or make a sketch or drawing.
- D) State your preferences for the trigger from most to least preferred. You may trigger the strobe by beam-break or audio triggers. The audio trigger uses the vibration caused in the table by the balloon striking the tabletop.