

Physics 335, Spring Quarter 2012

Electric Circuits II

Homework Assignment 3

Due 9:30am Tuesday April 24

Exercises in monostables (“one shots”). You’ll likely have to study the relevant data-sheets in order to figure out how these devices work. The general operation of these devices is also described in the textbook.

1. Sketch how you would configure the CD4538 as a non-retriggerable monostable.
2. Suppose you configured a 74LS123 monostable with a $10\text{ k}\Omega$ timing resistor and left off the timing capacitor. What’s the resultant approximate output pulse-width? Hint: you’ll need to look at a data-sheet.
3. Suppose you connected R_{int} (pin 9) of a 74LS422 monostable to V_{cc} and you left off the timing capacitor. What’s the resultant approximate output pulse-width? Hint: You’ll need to look at a data-sheet.

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