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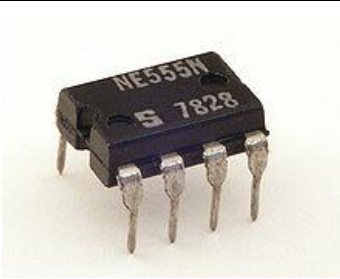


Introduction To Digital Electronics – Lesson 8: Design A 4-Bit Shift Register

PARTS

The following information is meant to go with the online lesson found here:
http://www.pyroelectro.com/edu/digital/shift_register/

PARTS OF A 4-BIT SHIFT REGISTER

In this lesson we learned how to build a 4-bit shift register using d flip-flops. This meant that we need 2 IC's, a lot of parts and a breadboard to get things built up. Below are some of the parts used in this experimented with more details.

Picture	Type	Description
	Thru Hole 555 Timer 8 Pin DIP	The clock signal to drive the shift register was derived from this 555 timer. We set it to two modes, one at 0.5 Hz and one a little faster at around 10 Hz. Datasheet Link
	74HC74 Dual D Flip-Flop	To form the shift register we used two 74HC74 ICs which equaled 4 D Flip-Flops. We connected LEDs to the output to 'see' the shifting in action. Datasheet Link
	Crystal Oscillator 4 Pin DIP	For the curious, you can use the crystal oscillator instead of the 555 timer to drive the clock on the d flip-flops. Datasheet Link

ADDITIONAL INFORMATION

To ask questions about anything found in this information please head on over to the forums located at:

<http://www.pyroelectro.com/forums/viewforum.php?f=21>