

# Lab 4 Intro

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- Goal:
  - Measure TTL and CMOS IC digital logic parameters
  - Compare to the specifications

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- Process
  - Collect all the required components (ICs)
    - The LSxxx components came with your kit
    - The CDxxxx components are available from the tech-center
  - Wire up the ICs per the description
  - Review the [Common Waveform Measurement](#) slides
  - Setup the AD2 to drive the inputs and measure the outputs
    - $V_{DD} = V_{CC} = 5V$  for all tests
    - Use the Wavegen output to drive the circuit
      - Use the DC output for the  $V_{OL}$ ,  $V_{OH}$ ,  $V_{IL}$ ,  $V_{IH}$  tests
      - Use the square wave output for the  $t_{pdx}$  input signal
        - Review the expected delays in the spec to setup the frequency for the square wave
    - The DC measurements can be done using the voltmeter or scope
    - The  $t_{pdx}$  measurements require the use of the scope
  - Compare all measurements to the associated spec