

EECE 143 Digital Electronics Laboratory

Important:

The following laboratory procedures were left out of the Laboratory Manuals but should be completed in lab.

CADET bounceless push-buttons, logic switches, and LED indicators (LEDs).

Connect two logic switches to two LEDs. Connect each scope channel to one of the switches. Set scope for single-edge trigger on channel 1. Flip combinations of the switches. Measure the logic 0 and logic 1 voltages. Check for “bouncing.” Connect a 560 W pull-up resistor from each bounceless push-button to +5 V. Connect the LEDs and scope to the buttons. Repeat voltage measurements and check for “bouncing.”

Schmitt gate digital clock.

Assemble the circuit of Figure 0.1 Measure the output frequency, duty cycle, low voltage, high voltage and rise time using the HP1652B. Change C1 to three other values and repeat measurements. Change R1 to three other values and repeat measurements. Try to find the minimum and maximum frequencies.

Figure 0.1 Schmitt gate digital clock

