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INTRODUCTION TO MICROPROCESSORS

247-302-VA section 00001

Final Project User guide

* i. Features and functionality

Two user inputs that for timing and one for additional features.

The two timing inputs (Gate 1 and 2) are triggered in sequence and the time between the two presses is recorded. If the timer waits for more than 9.9 seconds without response it will go back to idle and wait for a new input. The third input switches to a memory viewer mode that allows you to look at the EEPROM containing previous sequences time.

* ii. Operating procedures

Power on the device with the code loaded and wait a few seconds for all the components to properly startup. Once started and in idle it should display 00 on the timer display and 0 on the global counter. Press gates 1 and 2 in sequence with a pause in between and the time will be displayed for a short time while the global counter will be increased.

* iii. Basic troubleshooting

Check the wiring, this was my most common problem. Other than that try pressing the gate 2 button to verify if you are stuck in memory viewer mode and if you are press the mode switch button to switch back to normal idle mode. To be more specific about the wiring, if the display output does not look correct look at the 7 segment and decoder wiring while if the inputs are not working correctly look at that button’s wiring.