

Notes on **washer timer**

Overview

The washer timer is part of a dishwasher timer project using an esp32-C3 supermini. It controls a segment display and handles various wash cycles and delay timers.

Current Functionality

- **Pin Definitions:** Defines pins for different wash cycles, start button, and delay timers.
- **Timer Variables:** Manages selected time, timer state, and display intervals.
- **Display Setup:** Initializes and controls a TM1637 segment display.
- **Button Detection:** Detects which wash cycle or delay timer button is pressed.
- **Timer Management:** Starts, updates, and checks the status of the timer.
- **Display Updates:** Shows remaining time and flashes "done" when the cycle is complete.

To-Do (*software*)

☒ **when done !**

1. ☐ **Fix Timer Detection:** Correct the logic for detecting multiple timer buttons pressed simultaneously.
2. ☐ **Enhance Display:** Improve the display logic to handle edge cases and ensure accurate time representation.
3. ☐ **Code Optimization:** Refactor redundant code and improve readability.
4. ☐ **Error Handling:** Add error handling for invalid states or button presses.
5. ☐ **Testing:** Thoroughly test all functionalities to ensure reliability.

To-Do (*hardware*)

☒ **when done !**

1. ☐ **Check washing machine pinouts:** Measure how the washing machine buttons are working and how they are connected etc.
2. ☐ **check where controller gets it's power**
3. ☐ **Build the test setup ready**

Potential Improvements

- **User Feedback:** Add auditory or visual feedback for button presses.
- **MQTT implementation:** Implement MQTT to send remaining time to home assistant etc.