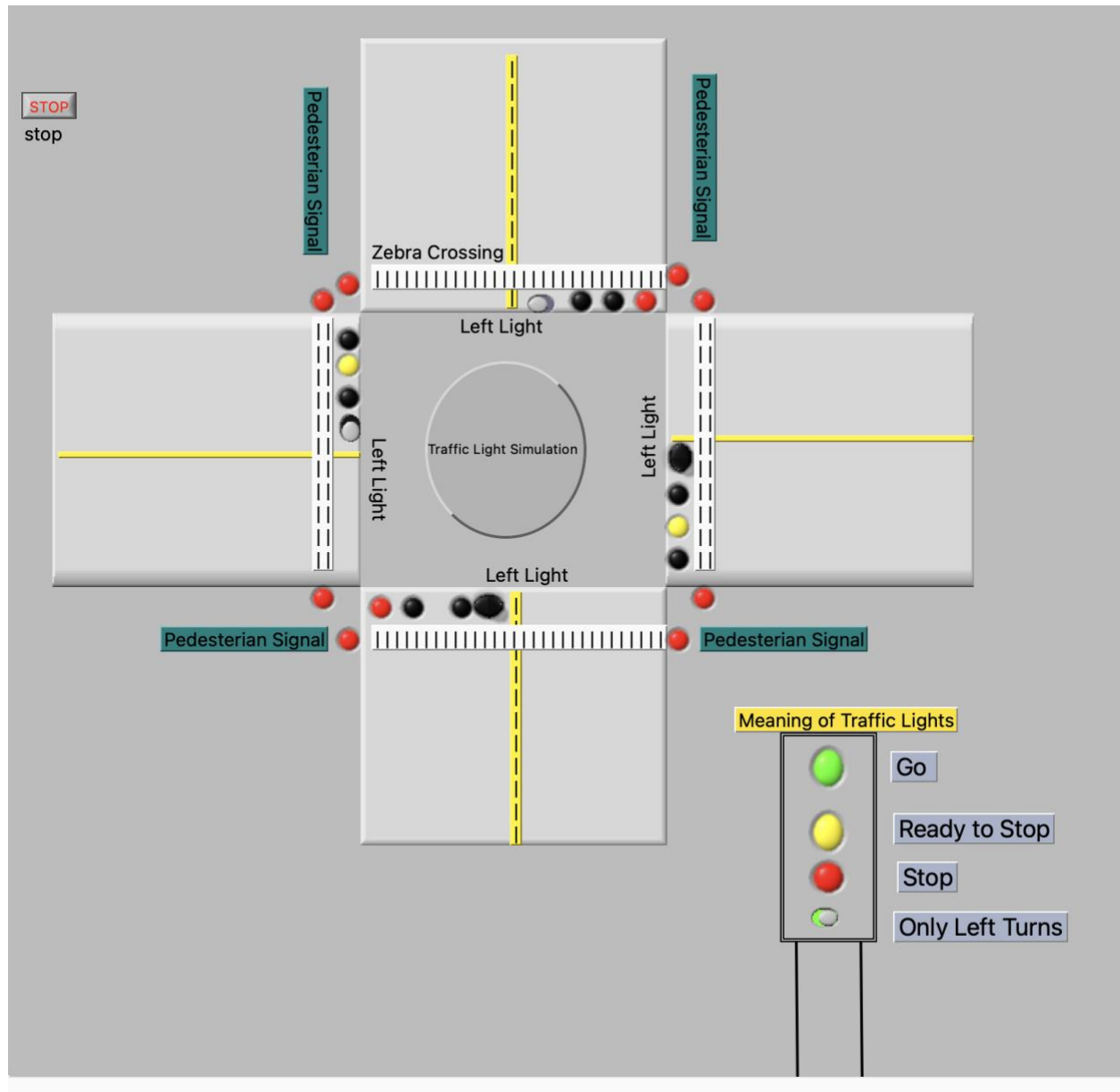# Traffic Lights Test Requirements

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This project report is about testing the project with different requirements. I have a list of test criteria to check whether my project fulfills or not. I tried making simple layout or display design for my project. I even wrote some of the instructions in front panel to clarify the confusion. I tried showing the actual scenario than just the traffic lights in a four two-way junction. I even worked on showing the pedestrian signal and lights for left turns.

So, below I have different test requirements and I will check whether the appropriate LEDs lights turn on or not for each direction. I have used 15 seconds as a delay time for transition of traffic lights.

Requirements Criteria

My design of traffic lights is for four way traffics at an intersection i.e from East to West, North to South and vice versa. So, I have the list of requirements that my simulation should pass.

1. There will be three main lights: Green, Yellow, Red, and other light for Left Turns and Pedestrian Light in every four lights in the road.

2. Green light will direct the traffic to proceed, yellow light will direct drivers to prepare for stop and red light will direct to complete stop.

3. Left turns only at Left Light Signal

4. 15 seconds delay for transition of lights.

5. North and South (N-S) traffic lights controls the traffic flow in N-S lane.

6. In case of green light on N-S lane
   - There must be the red light on east west lane.
   - Pedestrian signal should turn on for E-W and red light on N-S lane
   - Left Signal should be off for all directions.

7. East and West (E-W) traffic lights controls the traffic flow in W-E lane.

8. In case of green light on E-W lane
   - Red light on N-S lane
   - Pedestrian signal should be green for N-S lane but red signal on E-W lane.
   - All left turns should be off.

9. In case of Left Turns
   - For East and West left turns, all other lights and pedestrian signal must be off
   - For North and South left turns, all other lights and pedestrian signal must be off.
   - All other lights must be off