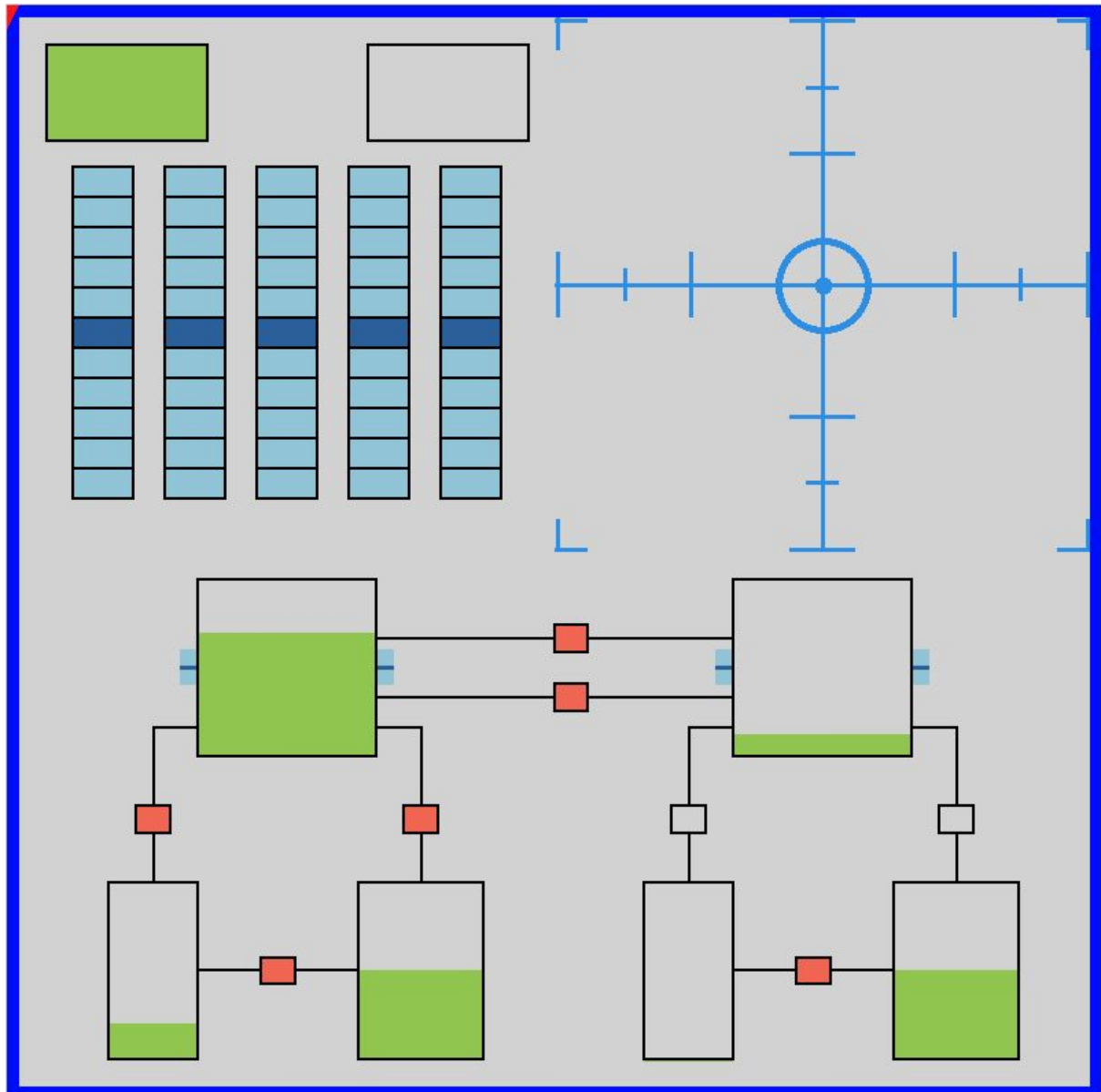


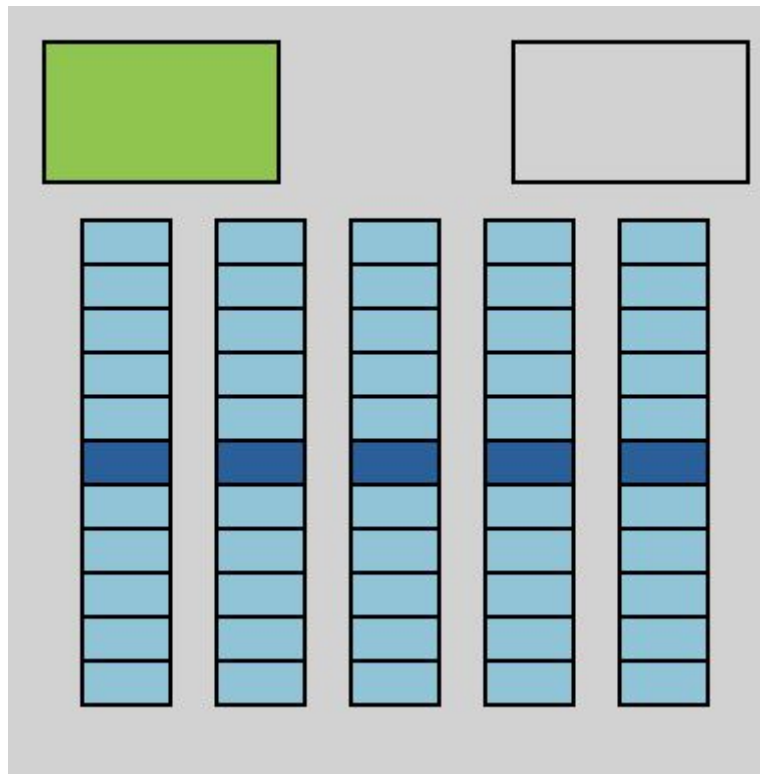
Airplane Cockpit Environment

The objective of this simulation is to monitor performance whilst participants engage with managing multiple tasks at once. The context of the environment is that you are a pilot that has to monitor multiple instruments at once in order to safely navigate to the desired location. There are three key tasks that are described below.

The multiple task environment



Task One: System Monitoring (top left)

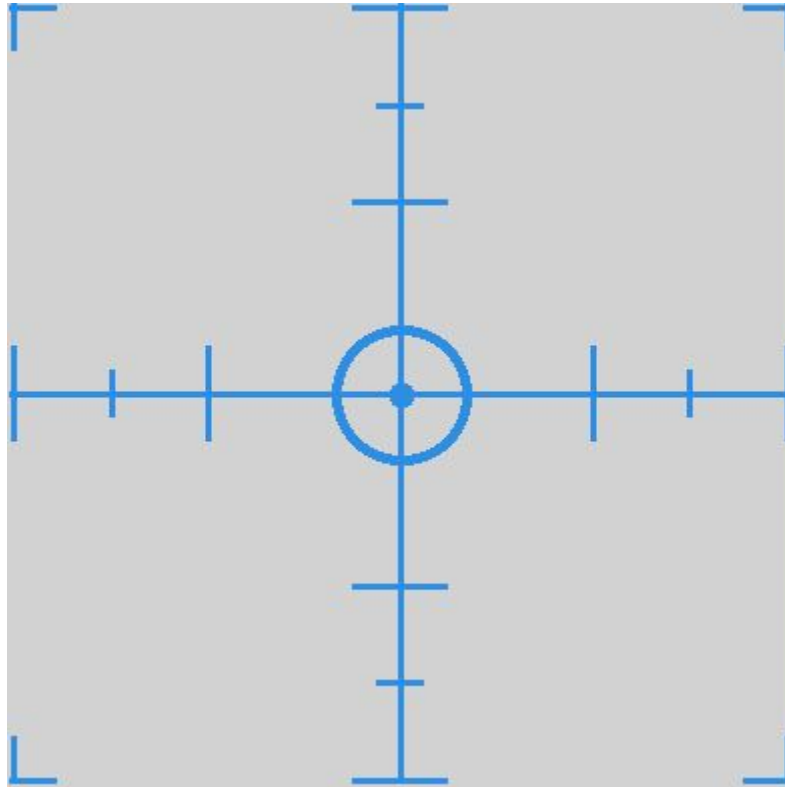


The system monitoring task is presented in the upper left window of the display. The demands of monitoring gauges and warning lights are simulated here. You must respond to:

- **The absence of the Green light** (Top Left)
- **The presence of the Red light** (Top Right - Shown Blank)
- **Monitor the four moving pointer dials for deviation from midpoint**
(The ideal position is shown above)

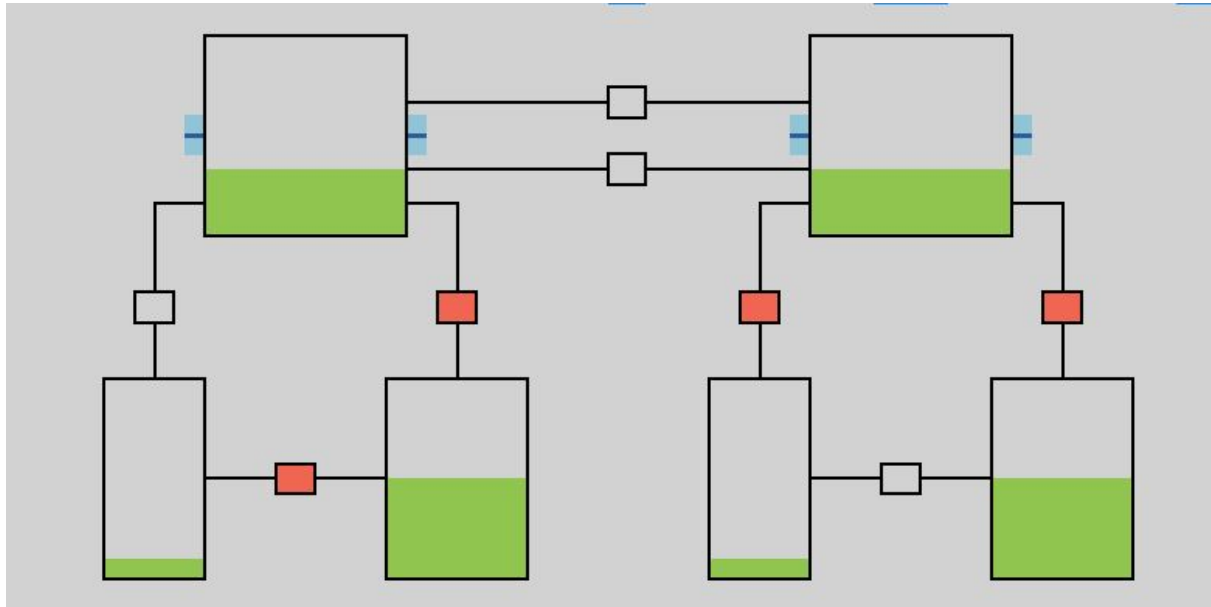
In each of these tasks, clicking with your mouse upon the object will reset it to the correct state (e.g., it will bring the green light back on, remove the red light, and clicking on the dark blue rectangles will reset the pointer dials to the center position). For green and red light tasks, you only have a brief window of opportunity to correct these before they reset themselves. If they reset themselves, you have missed the opportunity and will be negatively scored. The four moving pointer dials should be kept as close to central as possible at all times.

Task Two: Tracking (top right)



The demands of manual aircraft control are simulated by the tracking task. Using the Joystick, you must keep the target **at the center of the window**. Occasionally, this task may switch to 'autopilot', and self-correct without user input. You will be scored by the average deviation from the center point.

Resource Management (Bottom)



The demands of fuel management are simulated by the resource management task. The green levels within the tanks represent the amount of fuel in each tank, and these levels increase and decrease as the amount of fuel in a tank changes. **The goal is to maintain the level of the top two tanks within the blue indicators** (e.g., both of the tanks are too low in the above image).

You are provided with a total of eight pumps to alter the flow of fuel, which are indicated by small square boxes. All pumps can be turned to the ON or OFF position via mouse click unless they have failed. Pump failures can occur and are shown by a red area on the failed pump. The bottom four tanks are continuously refilled at a set rate.

Assistance System

Where there are issues you have not yet addressed, there is an assistance system that is able to provide visual guidance that is designed to prompt you.

The system does so by highlighting regions that you should attend to with a bold red rectangle bordering the object. For instance, the below image demonstrates that you should attend to the resource management task elements. These highlighted regions provide optional suggestions on how to improve your performance upon the task.

