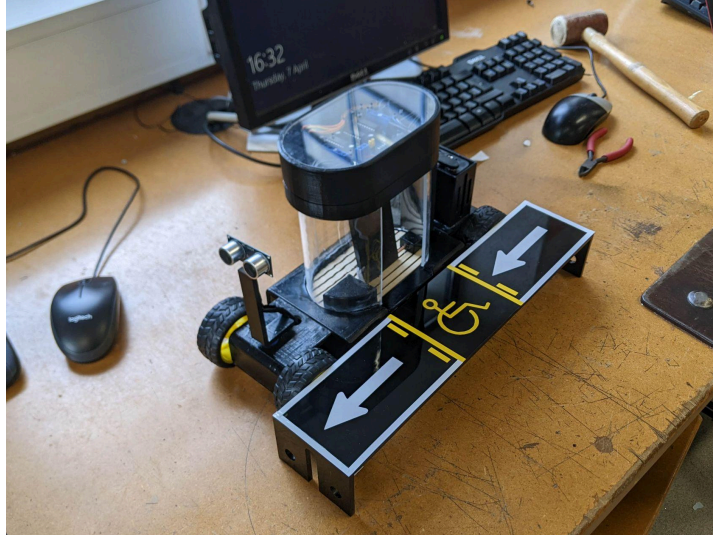


Instructions for State Examinations (SEC) Examiner
Leaving Certificate Technology 2022
Examination Number: 150 979

Please follow all instructions necessary and the images that are included in this document.

1. Place the project on the floor with the road artefact and position it like this.



2. Make sure there are no obstacles in the way, eg. chairs and other objects and make sure the project is either looking straight in the direction of the tap (North of the Technology Room) or in the direction of the entrance door of the Technology Room (South of the Technology Room).

Please make sure the rotatable platform is aligned to the wheelchair sign as shown above and make sure that the road artefact part is perfectly aligned with the vehicle.

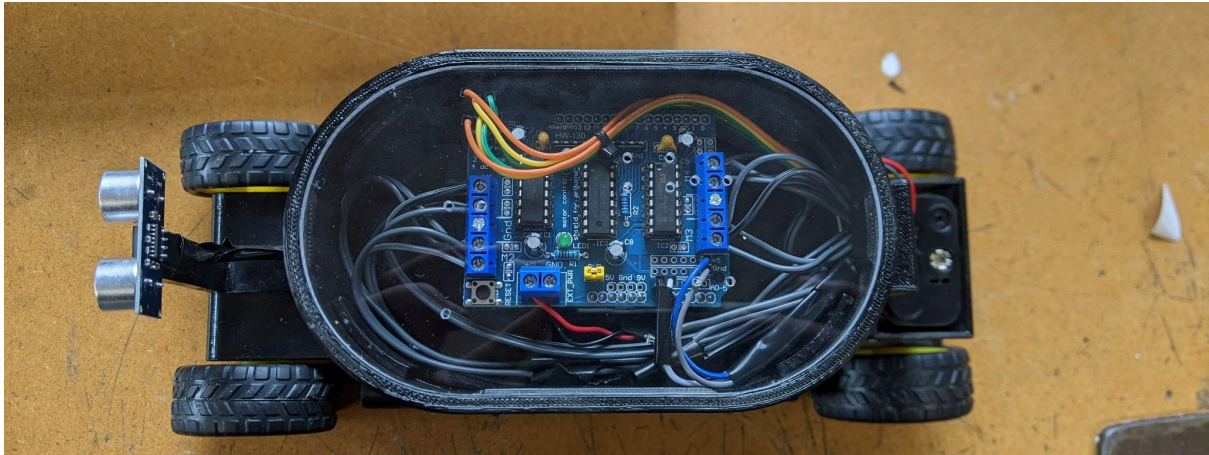
3. **Begin Sequence** - Once aligned and all precautionary measures are done, turn on the SPST switch. At this stage :

Notes -

- ☒ When turned on, the rotatable platform will rotate immediately 90 degrees downward for 10 seconds (Acts as a sequence when passengers go on the vehicle)
- ☒ After 10 seconds, the rotatable platform rotates back to its original position.
- ☒ The system waits for 10 seconds after the platform is back to its original position. At this stage, the system assumes that all passengers are loaded and the vehicle is ready to begin the sequence.
- ☒ At the 10 second mark, you will see that the Ultrasonic sensor with the servo motor rotates a bit, this ensures that the sensor is looking correctly.
- ☒ **Begin Operation** - The system is active, use your hand at a distance (around 10-20 cm) and wave the hand/object in the way of the sensor so it detects an object and is activated.
- ☒ All 4 motors turn on and the system turns on. In this case :
 - If there are no obstacles in the way, the system will go forward.
 - If the sensor detects a moving/fixed object (for example a pedestrian or a wall) the system stops and rotates all 4 wheels at a 5-degree angle and checks if there are any objects in the way. The process is repeated once there are no obstacles in the way of the sensor.

4. **End Sequence** - Once done, please turn off the SPST switch and disconnect the battery cable if necessary.

If the examiner wants to see the board:



- If the examiner wants to see what's inside the board and what inputs are used, the board base can be opened for **maintenance and changing** components, however, please **proceed with caution** when opening it.
 - When opening the casing, the cables may get loose and cause some components to be disconnected from the board and the motor board.
 - Please make sure that the SPST switch is turned **OFF** and the battery pack stays **disconnected**, due to the amount of load and power consumption by the board. The battery can stay connected in some situations if required but please proceed with caution.
 - When assembling the casing back in, please ensure the cables are **packed in correctly** without causing too much interference with the board. When assembling back in, there should be 4 stands, **align the case back in** and use pressure on the 4 stands in order to squeeze the casing back into its original position.
 - **Please note that the cable shaft may be loose**, this is for any cables that may get stuck since all the cables are tightly managed so each one can easily be dismantled if required.

All extra details are available in the folio. Thank you for examining my project.