

Light Control and Path Prediction Using Human Detection

How to Run

Ethan Belculfine

Adeeb Alqahtani

Abdulrahman Aljurbua

Assuming the user has the package ready: Mount the package in a convenient location. This location must have a clear view of the pathway to be lit by the accompanying lights, a clear view of the sky above if a light sensor is in use, and access to two standard 110 Volt AC Power outlets. Ensure the light sensor has an unblocked view of the sky, and the accompanying lights do not feed light into the light sensor when they are powered. Ensure the chosen human detection sensors have an unblocked view of the desired path. Plug the two power cables into two nearby 110 Volt power outlets.

To prepare package: Attach the transceiver, receiver, relay, and sensors to their specified power, ground, and Arduino board input and output locations. Attach the Arduino board power cable to the Arduino board and attach the 110 Volt AC to USB adapter to the USB end of the Arduino board power cable. Assign each node with an ID, and provide each node with the ID's of its two neighbors. Provide each node with the coverage range of its detection sensor or sensors, as well as the distance between coverage ranges of itself and each of its neighbors