<https://www.allaboutcircuits.com/projects/how-to-build-a-robot-follow-walls/>

### Following Walls

In order to follow walls, you need at least two sensors (2 bits of information) to handle the four potential situations the robot could be in. **One sensor has to be in the front, and the second could be on the left or right of the robot**. The more sensors you use, the more information you have, so you can make better judgements about what is going on. For this example, I just used two. The robot cannot find the wall, so you have to place the robot next to the wall. If you placed it in the middle of the room, it would just drive in circles.

#### Truth Table

|  |  |  |  |
| --- | --- | --- | --- |
| **Front Sensor** | **Right Sensor** | **Situation** | **Action** |
| Off | Off | Robot is driving away from wall. | Come back to wall, turn right. |
| On | Off | Robot is away from wall but headed towards a wall or obstacle. | Turn hard left to get back parallel with the wall. |
| Off | On | Robot is following the wall. | Drive forward. |
| On | On | The robot is at a corner. | Turn hard left. |