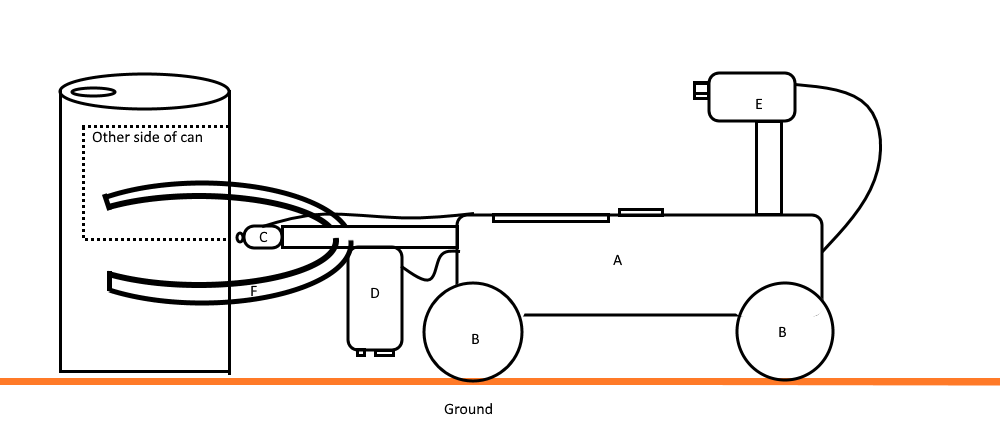
Rover External Specification



Pretend you are user with some knowledge “ONLY OBSERVABLE STUFF” “Don’t mention lego brick” “think of all possible states” Consistent layout to explain” Find this

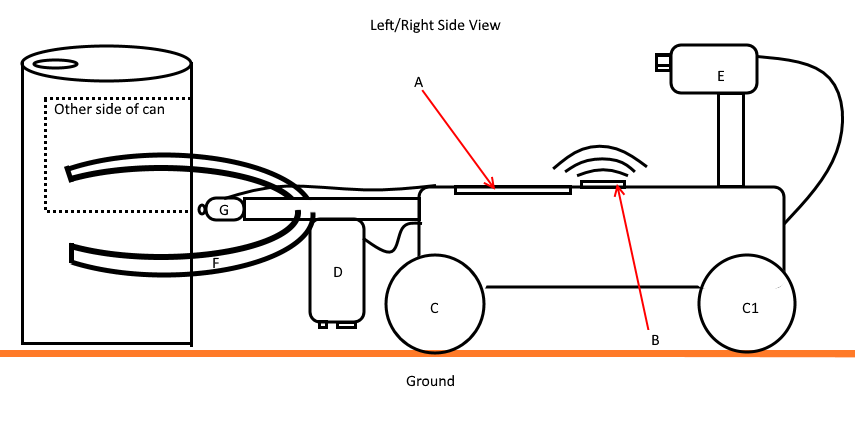
Isolate each interface\*\*\*\*\*\*

List of interactions

|  |  |  |
| --- | --- | --- |
| Id | Part | Interactions Description |
| A | Sound System  (Martian Interface(display)) | Interacts with sensors and wheels. Produce noise based on function. Plays sound for the bot.  The sound system plays a tone at a High pitch when the wheels are turning counterclockwise. It also will play a tone at Low pitch when the wheels are turning clockwise. When the Push sensor is pressed the sound, system will play a Medium pitched tone. |
| B | Wheel | Interacts with ground, sound system, and sonar sensor. The wheels allow the bot to move on any surface. The system has 3 wheels, two are located at the top left and top right of the lejos brick, the third is at the back of the bot and is centered. The wheels start stopped until the Sonar sensor |
| C | Claw and Push sensor(Can interface) | Interacts with can and chassis. When its pressed due to pushing a can the chassis will play a Medium pitch tone. The push sensor notifies the system which then begins to time and measure the distance pushed during removal. |
| D | Light sensor(Ground Interface) | Interacts with ground, light and chassis. It gets the light value at the current position by checking the grounds light value. Communicates to the system to determine movement. |
| E | Sonar sensor  (Can interface | Interacts with the environment and chassis. The sensor pulses to find cans. If a can is detected it will |

Redux

//TODO: come up with states to think through it.



|  |  |  |  |
| --- | --- | --- | --- |
| Interface | Ids | Id Locations | Function and Events |
| Martian Interface | A  (display system) | Located at the at the top of the robot near the front facing the sky, its above B. | On Ground interface detection:   1. Displays can removal data 2. Displays the distance the can was pushed and the time it took for removal |
| B (sound system) | Located at the top of the robot between A and E facing towards the sky. | Produce noise to notify Martians based on an event.  The sound system plays a tone at a High pitch when the wheels are turning counterclockwise. It also will play a tone at Low pitch when the wheels are turning clockwise. When the Push sensor is pressed twill play a Medium pitched tone. |
| Ground Interface | C | Located at the bottom front corner on the rover, to the corresponding side of the view touching the ground. Adjacent to D. |  |
| C1 | Located toward the back of the rover aligned to be centered with the front wheels. |  |
| D | Located at the front of the rover below the claw(F) adjacent to C, facing the ground. |  |
| Can Interface | F |  |  |
| G |  |  |