**Engineering Notebook**

**September 10, 2017**

For the new season of FTC, the Robo Eclipse Team Members decided that we were going to devise a plan for each of the tasks. Carefully and thoroughly, we planned the tasks that we were going to do. We started by ranking the tasks from easiest to hardest and then ranking them from most points to least points. The following table displays the amount of points that each task gives in autonomous.

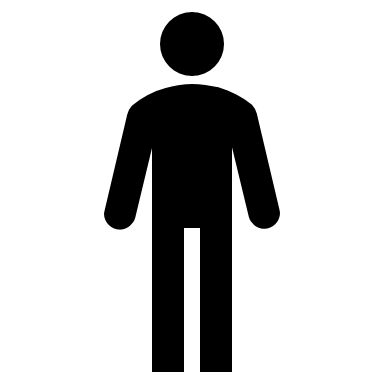
|  |  |  |
| --- | --- | --- |
| Task | Points | Difficulty |
| Knock Jewel Off | 30 | Medium |
| Parking in Safe Zone | 10 | Easy |
| Glyph Placed | 15 | Hard |
| Decoded Message | 30 | Hard |

Along with autonomous, we also decided which TeleOp tasks would be easy or hard.

|  |  |  |
| --- | --- | --- |
| Task | Points | Difficulty |
| Glyph Scored in Box | 2 | Medium |
| Row Completed | 10 | Medium |
| Column Completed | 20 | Medium |
| Pattern Completed | 30 | Medium |
| Relic Placing | 10, 20, 40 | Medium |
| Stand up Relics | 15 | Hard |
| Balancing | 20 | Hard |

Based on this, the team would plan accordingly. We decided that we would first work on knocking the Jewel Off and parking in the Safe Zone in the autonomous period because those would be easier tasks that could be completed. We were also giving ideas for the glyph lifter because it would let us get a jump start and not fall behind.

Though Relic placing was decided as not particularly hard, we still opted on saving that task for later.

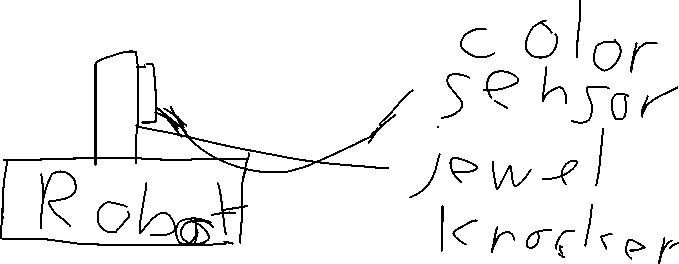


10

20

40

Our plan for knocking the jewel off would be to have a small part sticking off the front of our robot. This part would be stable and we would have a color sensor detect the color of the particle it was facing.



The sensor would look at the color corresponding to the alliance. If it was the color needed, then we would adjust accordingly.

We also began to look at mecanum wheels and how to write a program that would get them to run. The team has currently been working on getting such a working android app for the mecanum wheels.

This will soon play to our advantage when being able to move around the field.

**What we learned:**

We gradually learned how to utilize the color sensor to construct a perfect robot for the team and how to program the mecanum wheels to get the best omni-direction for our robot.