

Group number: DEC1707

Project title: Electromagnetic Train

Client &/Advisor: Professor Song Jimming

Team Members/Role:

- 1. Yap Yong Sheng (Team Leader)*
 - 2. Norfarahin Nordin (Communication Leader)*
 - 3. Chung Sheng Su (Webmaster)*
 - 4. Shi Xiang Lim, Larry (Concept Key Holder 1)*
 - 5. Mustafa Hafez(Concept Key Holder 2)*
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○ **Weekly Summary**

Throughout this week, we set up the optimum turns of the coil per inches on the large track. Other than that, we also did some preparation for the upcoming presentation. We are working on the website issue and the group email that doesn't seems to function well.

• **Past week accomplishments**

Yong Shen

I did some research on which board should I use to support the tracks and should not deform the tracks easily. The best board to use in this project to support the track is unfolded cupboard boxes. This is because they are strong and not easy to be bend. Last Friday, I went to 3 places to find the unfolded cupboard boxes to support the track. Lowe's do not have any unfolded cupboard boxes and the unfolded cupboard boxes in Walmart are expansive. There are a few choices in Staples and they are not too expansive. So, I got 1 from Staples. I spent 1 hour to look for the perfect unfolded cupboard boxes. On Monday, Chung Sheng Su and I built the tracks and use tape to stick the tracks onto the unfolded cupboard boxes. We spent 2 and half hours to build it. We used 9 turns per inch method to

build the tracks. We used paper and ruler to measure 9 turns per inch before tape it onto the unfolded cupboard boxes. It helped us to build it faster and accurately.

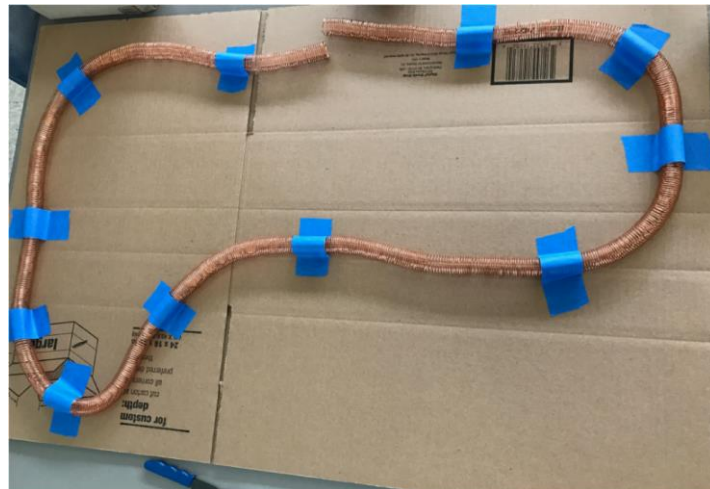
Larry Lim

Review EE 311.

Look up how the train behaves on a slope.

Chung Sheng Su

This week, I am in charge in shaping the track of the electromagnetic train. As last week we have finish coiling the copper wires on a PVC pipe, this week Yong Shen and I reshape it so that the distance between each coil is 9 turns per inch. We decided to use this width for the coil because we found that 9 turns per inch produces the greatest velocity for the train based on the video that Professor Song sent us. After that, in order to maintain the shape of the track as it can be deformed easily, we tape it to a cardboard as shown on the figure below so that it act as a stable base for the track. In the following week, we may create a variety of variables to proves that 9 turns per inch the most optimum coil for the track.



Norfarahin Nordin

In this week, I have been testing small sample of the track by manipulating the distance between coil turns. By this way I can compare the performance of the optimum track turn distances.

- **Pending issues**

Brainstorming and discussing the way to fix the coil track without damaging the distance between the coil.

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Yong Shen	Set up the gap between the coil for optimum performance.	4.5	30.5
Farah Nordin	Merged design document, test out small tracks for the optimum turns per inches and all the reports for the website.	4	35
Larry Lim	Worked on the design improvement.	4	35
Chung Sheng	Worked on the website for the group project, set up the coil gap and fix it to the board.	4.5	32.5
Mustafa Hafez	Worked on the research and information for the presentation.	4	29

○ **Plan for coming week**

Test out the mini model with the optimum gap distance set up.

○ **Summary of weekly advisor meeting**

There is no advisor meeting for this week.