

# MEETING MINUTES

**Topic: Bottom Plate, Safety Mechanism (Manufacture and Install), Plastic Cover, Circuit Puzzle and Full Assembly**

Sunday, February 19, 2017 at NAU ME Fabrication Shop  
10:00am – 4:00pm


Minutes recorded by: Ali Alkhaiyat, David Rankin, Yongseok (Kevin) Park, Carlos Shields

Meeting called by: Ali Alkhaiyat

Attendees: Ali Alkhaiyat, David Rankin, Yongseok (Kevin) Park, Carlos Shields

**Table 1. Record of Meeting**

<b>Team Member(s)</b>	<b>Task Completed</b>
<p><b>Kevin, David and Ali</b></p>	<p><b>Safety Mechanism (Manufacture and Install)</b></p> <ul style="list-style-type: none"> <li>• <u>10:00am – 12:30pm:</u> <ul style="list-style-type: none"> <li>○ Ali came with an idea to use the spring mechanism that has a pipe inside to be pulled when the front cover opened to lock the gears from the left side. However, that idea did not work because the gears could be rotated for the right side. David came with an idea to use the spring in another way. He wanted to lock the shaft from the bottom plate by using the spring. He manufactured a square locker that could lock the shaft. David asked Kevin to cut the unnecessary parts of the square locker by using bandsaw. The square locker could be used to bolt a steel pipe in. The steel pipe was inside a spring. David drilled a small hole in the bottom of the steel pipe to fit a galvanized vinyl-coated wire in. The galvanized vinyl-coated wire is connected from two sides. The first side was connected through the pipe that was connected with the square locker. The other side could be supported on a hock. Then, Ali went to the Home Depot to buy a hock and (ferrules and stops). The ferrules and stops were for inserting the galvanized vinyl-coated wire in and locked well to assure the wire will not move.</li> </ul> </li> </ul>
<p><b>Kevin, David and Ali</b></p>	<p><b>Bottom Plate</b></p> <ul style="list-style-type: none"> <li>• <u>12:30am – 1:30pm:</u> <ul style="list-style-type: none"> <li>○ David and Ali started working on the 2' x 2' bottom plate. David and Ali used the four parts of the 9" x 3.5" puzzle frame to put them under the 2' x 2' bottom plate. Ali Drilled two holes for each 9" x 3.5" puzzle frame. Then, David used two screws for each 9" x 3.5" puzzle frame to bolt them. David did 5/8" hole for the 2' x 2' bottom plate. Ali took off all parts of the gear box because David needed to cut a square piece on the wood bridge part for the shaft locker. Then, David cut a square piece on the wood bridge part inside the gearbox by using the jigsaw. After that, Kevin and Ali reassembled the gear box.</li> </ul> </li> </ul>

<p><b>Kevin and Ali</b></p>	<p><b>Plastic Cover</b></p> <ul style="list-style-type: none"> <li>• <u>1:30pm – 2:00pm:</u> <ul style="list-style-type: none"> <li>○ Kevin cut the plastic cover for three parts. The first part was for the top gear box cover and he bolted it on the gear box. Then, he cut two parts for the front cover. Ali cut a rectangle slot form the front plastic cover due to the shaft. Ali brought the two hinges after he bended them for the front cover. Kevin bolted the front plastic cover with the hinges.</li> </ul> </li> </ul>
<p><b>Carlos</b></p>	<p><b>Circuit Puzzle</b></p> <ul style="list-style-type: none"> <li>• <u>2:00pm – 2:30pm</u> Carlos came up with an idea to add a light for the circuit puzzle while all the wires are connected correctly. He used a resistance to be connected with a red light. Also, he connected a battery holder inside the circuit puzzle to transfer the electricity for the light. He tested the light and it turned on. He is still working to complete the circuit puzzle.</li> </ul>
<p><b>Ali, David, Carlos and Kevin</b></p>	<p><b>Full Assembly</b></p> <ul style="list-style-type: none"> <li>• <u>2:30pm – 4:00pm</u> After mounting the completed gearbox and the generator. Ali recorded a video while David was rotating the gears and Carlos was helping Kevin to connect the generator to the race track. Here below is a proof for what we did so far.</li> </ul> <div style="text-align: center;">  <p>Wonder Factory - Proof of Concept.MOV</p> </div>

**Here below are some pictures of our previous meeting:**

