SDSU | San Diego State University

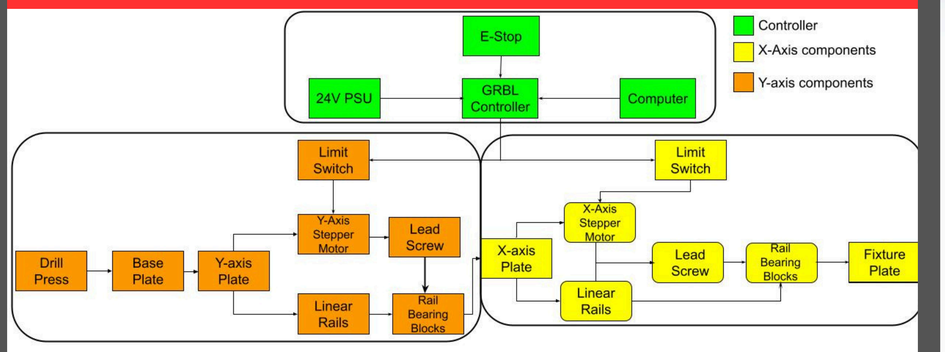
Mechatronics CNC Table

Description

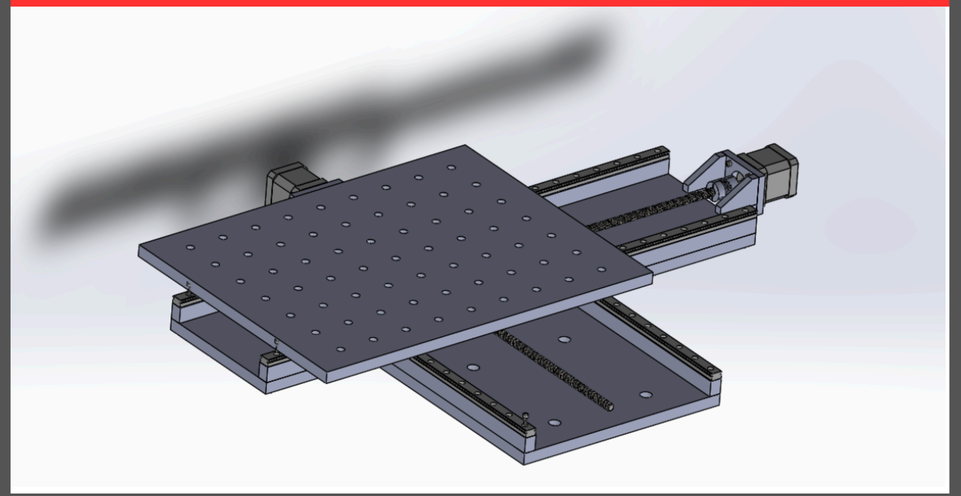
The SDSU Mechatronics team often needs to drill precisely located bolt patterns, but they only sometimes have access to the machine shop to use the tools there. This is time consuming since there is a wait time for access to the machine shop and because it is away from the main trailer.

To speed up their manufacturing process, our project is to design a custom CNC cross table to help position components under their drill press. The main challenge in the making of this project is the precision that is needed but the low budget. With a budget of about $300 we need to give a precision of 0.010 true position tolerance during drilling operations.

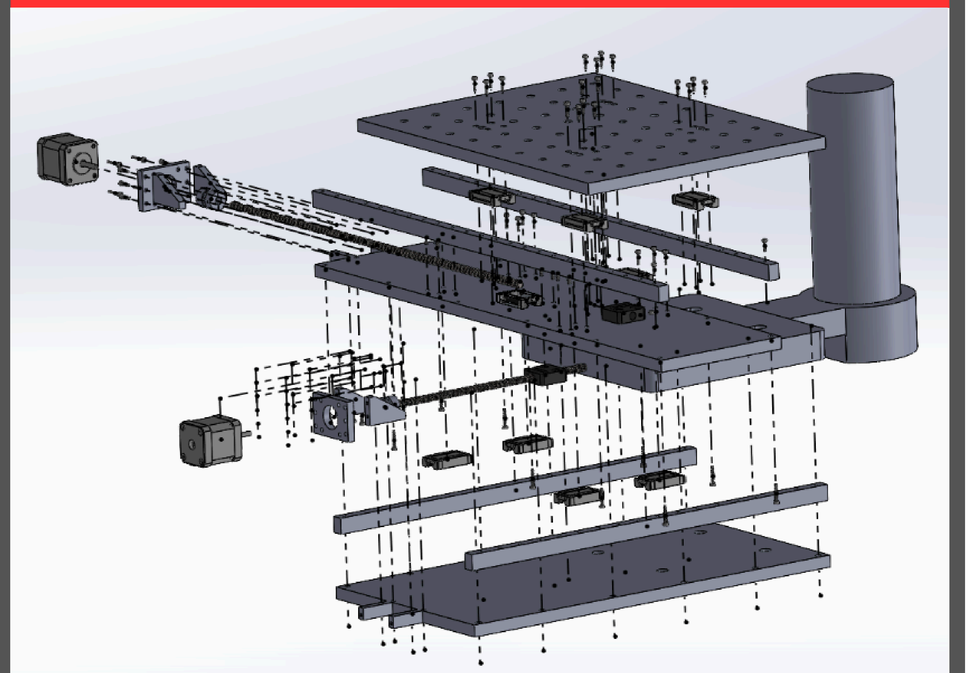
System Level Diagram



CAD Assembly



CAD Exploded View



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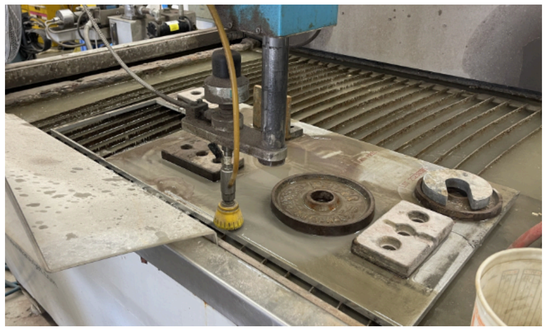
Manufacturing



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