

Team 23:

Stephen Friesenhahn

Aaron Mohammed

Robert Pitcel

Robert Wollney

Project Deliverables

- 1) 2 motor controllers that safely handle high amperage spikes, switch motor direction quickly, provide regenerative motor braking and a current limit.
- 2) Motor Controller Micro Controller Board that accepts RF input from a RF Joystick and provides the motor direction and motor speed control input to the newly designed motor controllers
- 3) RF Joystick that communicates motor speed and direction to a Motor Controller Micro Controller Board.
- 4) RF Kill Switch to cut all power to the motors should anything go wrong during the motor controller testing.

Project Goals

- Take an existing wheelchair motor controller and redesign the controller to switch motor directions faster and make the controller safer.
- 1) Redesign the existing motor controller to switch motor directions faster by replacing the relays of the controller with one high power 400 amp mosfet.
 - 2) Redesign the existing motor controller to be safer by replacing the existing mosfets with one high power 400 amp mosfet.
 - 3) Develop a system to safely test the newly designed motor controller.

WHEELCHAIR MOTOR CONTROL

