Corbeau - Collision Detection Specification

**Overview:** what is the purpose of this spec? what are customer requirements etc

**Electrical:** how are the buttons hooked up to the Arduino? Pull down/up etc. (how many) and do we need filtering to reduce debouncing? This ties into software as well

**Mechanical:** ok so we need three separate bumpers for each switch. Maybe a drawing could help here? Dimensions are important. How do we attach foam bumpers to switch? What do bumpers look like? Perpendicular to ground, etc.

**Software:** we can either use a timer ISR to poll the three switch states and determine what flags to set – OR we can have three separate hardware ISRS which set the proper flags.

Also debouncing

(once flag has been set, don’t want to keep resetting it, or maybe we do)

**Timeline:**

Tuesday, March 1st – Submit schematic/analysis of electrical subsystem.

Thursday, March 3th – Electrical system complete/verified with soldered prototype.

Tuesday, March 8th – Mechanical System complete and photos/documentation submitted

Tuesday, March 15th – Complete collision detection subsystem (software, electrical, mechanical systems complete) with cost analysis.

**Penalties:**

If the collision detection subsystem is not fully complete by March 15th, team Greige agrees to place team Corbeau’s flag on their final bot design to help alleviate the immeasurable emotional impact that being lied to had on the entire team.