Agenda (01/26/2015)

Subsystems

**Communications:**

* Use of IR or RF system
* Components (microcontroller, transceiver…)
* Signal transfer ( I2C or SPI)
* Max distance without interruption
* Circuit breaker to prevent potential damage
* Ways to prevent misuse
* Remote control settings ( including position/location in the room)
* Structure
* Features (how many buttons?)
* Charging/powering options (batteries)

**Device Structure**:

* Speed control mechanism:
* Circuit elements (TRIAC, etc.)
* Speed settings (discrete values)
* Account for mixer misuse
* Mixer modifications:
* Raising and lowering mixer head
* Speed adjustments

Safety Concerns:

* Ability to notice unexpected events that may interfere with process
* Standardize process to minimize misuse
* Optimal execution time

**Plan of Actions**

|  |  |  |
| --- | --- | --- |
| **Subsystems** | **Things to do** | **Assignments** |
| Microcontroller | * Design board * Create program * **2-16: know inputs and outputs for the microcontroller** | Project leader:  **Karina Dube** |
| Signal Transmitter/receiver | * Send signal from remote to mixer * Figure out system and protocol to use (IR, IF, I2C, SPI) * **2-16: send signal between two boards** | Project leader:  **Justin Erman** |
| Speed/ motor control | * Figure out what speeds we’ll be using * Figure out max. times for auto shutdown (in terms of clock cycles) * **2-16: show a manual control of the mixer** | Project Leader:  **Matt Martin** |
| Power | * Determine what type of batteries and possibly a charger for remote * Account for safety issues * **2-16: final design of the remote and ways to power as well as how long batteries last (interface)** | Project Leader:  **Arnaud Bacye** |
| Mixer changes | * Look for automated ways to raise and lower head of mixer * How to lock mixer * Figure out what internal components can be modified * *Relevant for Design review?* | Project Leader:  **Justin Erman** |
| Interface | * Personal assistance (voice signal, text, color coded) to prevent misuse * Figure out which buttons to use (size, shape) | Project leader:  **Karina Dube** |