What It Can Do

1. Sense the state of the surroundings and the mower
2. Drive with an informed view of one's surroundings
3. Record driving dynamics for future analysis
4. Increase safety and driving performance

The **sensor suite** records the dynamics of the mower while driving, giving Ariens the ability to investigate **wheel position**, **velocity**, **accelerations**, and **driver input** for every moment of a test run.

### Capabilities

**Slope Limiting Safety Mechanism**

Drive by wire capability allows implementation of **electronic controls** on a previously fully mechanical system. The drive by wire system is also designed to be easily adaptable to any mower. Stick input to motor driving output can now be customized for individual users.

#### Drive By Wire

**Old Mechanical System:**
- Tie-rod physically links operator stick to hydraulic pump.

**New Drive By Wire System:**
1. Potentiometer senses operator stick angle.
2. Motor receives signal and spins the hydraulic pump.

- **Faculty Advisor:** Aaron Hoover
- **Sponsor Liaison:** Josh Wilson
- **Ariens Scope Team:** Andrew Carmedelle, Tim Raymond, Casey Landey, Eric Jones

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**Record driving dynamics for future analysis**

**Increase safety and driving performance**

**Drive with an informed view of one’s surroundings**

**Sense the state of the surroundings and the mower**