

2004 Team 358 Robotic Eagles

Robot Capabilities:

- Speed: 9 feet per second
- Fast 2X Ball handler
- Pneumatic Goal grabber
- Pneumatic 2x ball grabber
- Hangs from floor – long reach
- Cable hanging - winch w/ shark hook
- Strong Pusher



Physical Details:

- Very low center of gravity, doesn't tip
- Own Transmissions with Incorporated Encoders
 - Optimized speed/power ratio
 - 6" pneumatic wheels for greater speed and power
 - Slick skyways for ease of turning
 - 4 motor drive - 2 CIM + 2 Drill
- 5' Tower with 5.5' Arms
- Tank Steering

Control System:

- Selectable 1 or 2 Joystick Driving ("Tank Drive")
- 2 Position Field Start
- 16 Autonomous Programs
 - Script Driven Autonomous – Rapid risk-free changes (2nd year running – very reliable)
- Drive Train Feedback Control (Encoders)
- "The Wall" Reactive System
 - You Push/Pull Hard, it Pushes/Pulls Harder automatically



Sensors:

- Gyroscope
- Drive Train Encoders
- Arm banner sensor for position
- Current sensors on main CIM drive motors

Additional Info:

- Duplicate robot for driver practice
- 5 year veteran award winning team
- Mentored multiple schools