



Team 1124 – The ÜberBots



Robot Features & Benefits

2012 Robot & Controls System:

- Two speed transmissions allows for multiple mobility options, high maneuverability, and high torque
- Encoders – 1 for each drive transmission and 1 for turret movement (3 total)
- Can pick up balls from both front and back of robot
- Total time from picking up to getting into shooting position in robot – less than 2 seconds
- 4 belt systems used to manipulate ball within robot – 2 intakes, 2 on tower
- 270° rotation of turret for shooting at any angle
- Automated aiming for shooting, uses retro-reflective tape
- Automatically determines distance from hoop to power shooter
- Pneumatic arm system to articulate bridge
- Uses all interchangeable parts - replacement parts ready
- We have identified failure modes and have countermeasures in place
- Bumpers securely fastened

During Autonomous Period:

- Can score in high hoop with high accuracy
- Can push bridge down to collect balls on alliance side

During Teleoperated Period:

- Can move quickly across the field
- Can pick up balls off the ground and get into scoring position quickly
- Able to score in all hoops
- Can score from any angle
- Can balance bridge autonomously, with multiple robots

Practice:

- Drivers have practiced for over 35 hours with an identical robot since Stop-Build date
- Practiced on a full size practice field
- Participated in multiple scrimmages and play dates

Recent Awards

2011

- Quarter-Finalists at Northeast Utilities Regional
- Northeast Utilities Regional Website Award Winners
- Quarter-Finalists at Chesapeake Bay Regional

2010

- Semi-Finalists of Archimedes Division
- Undefeated Performance at Northeast Utilities Regional
- Northeast Utilities Regional Rockwell Automation Innovation in Control Award Winners
- Northeast Utilities Regional Coopertition™ Award Winners
- WPI Regional Chairman's Award Winners
- WPI Regional Excellence in Engineering Award Winners

2009

- Galileo Division Quarterfinalists
- CT Regional Rockwell Automation Innovation in Control Award Winners

- Suffield Shakedown Champions

2008

- Ranked 4th Internationally
- Archimedes Division Champions
- CT Regional Champions
- CT Regional Kleiner Perkins Caulfield and Byers Entrepreneurship Award Winners

2007

- Championship Event Newton Division Finalists
- UTC CT Regional Champions
- UTC CT Regional Rockwell Automation Innovation in Control Award Winners

2006

- UTC New England Regional Champions

