

TEAM 1114 ***SIMBOTICS*** ***PRESENTS*** ***SIMBOT PANTHRO***



Drivetrain

- 6WD, wide layout
- Geared for approximately 10 feet/sec
- Wide orientation chosen for increased turning ability to make up for low friction rover wheels, and to allow for a wider intake

Intake:

- Roller and belt system power by two Fisher Price motors
- A high speed intake was a design priority, hence the allotment of two of the most powerful motors in the kit

Hopper:

- 0.063 Aluminum sheet metal
- Large volume for maximum capacity
- Sheet metal construction was chosen to reduce weight. Entire superstructure weighs less than 20 lbs.

Elevator:

- Roller system powered by two CIM motors
- To score a large volume of balls in short period of time requires high speed movement of the balls, and ample power to overcome jams, thus the choice of the two CIM motors

Launcher:

- Launcher has ability to adjust shooting angle and trajectory
- The launcher was designed with two degrees of freedom, due to the difficulty of precise robot positioning on the low traction surface

Control:

- Traction Control using encoders allows smoother acceleration and braking
- Camera tracking used for automated targeting of trailers
- Sensor usage reduces the amount of input required by pilots during the match