



# ACES Test Cases and Behavior

- Resting leader accelerates to a varying velocity
  - Follower ESC accelerates motor to cruising speed while making sure to keep a safe distance from leader as velocity fluctuates
- Cruising leader comes to a stop
  - Follower ESC applies resistance to motor making sure to stop before an impact is made
- Cruising leader makes soft turn
  - Follower detects leader with center and a side IR sensor. Servo arm turns wheels slightly causing follower to recalibrate position while keeping a safe distance
- Cruising leader make wide turn
  - Follower detects leader with only a side IR sensor. Servo arm turns wheels dramatically causing follower to recalibrate position while keeping a safe distance

# Cost Sheet

Part Number/Name	Unit	Number of	Total Cost
Ferrari FXX RC Car	117	1	117
2 RC Battery Packs with Charger	65	1	65
Arduino	50	1	50
Sharp IR GP2Y0A02YK	13	3	39
Digital Servo	35	1	35
Mini Breadboards	5	4	20
Miscellaneous supplies (poster, glue, wires,	20	1	20

Total =  
\$346