To return to ball collection area when done firing:

* Decide that we’re done firing
  + Nothing in loading mechanism after x second delay
* Continue until side wall switch triggered
* Drive about 1/3 of the way across based on time
* Convert to differential, turn 180
* Acquire middle tape (by driving forward and at a slight angle)
* Follow tape to collection area

To collect

* Follow tape back until one front switch triggers
* Pivot in appropriate direction until second switch triggers
* Wait a bit while pushing against wall with brush running
* Reverse slightly, angle to one side, drive forward into wall again
* Do same for other side. Repeat cycle as necessary

To return to wall

* Get servos to turn wheels until they are straight
* Reverse both wheels at same speed for x seconds
* Turn wheel motors in opposite directions to pivot robot 180o until tape detected with middle QRDs
* Use PID algorithm to drive forward following tape
* When both outer QRDs trigger (or other method of sensing T), drive directly forward until front touch sensors trigger. If one sensor triggers first, only turn wheel on opposite side to pivot robot until other touch sensor triggers
* Turn on lasers, reverse directly backwards until software threshold on laser QRDs is reached
* Stop, convert to bicycle mode (rotate wheel servos 90o in opposite directions)
* Begin wall following to the right

Wall following

* Strafe sideways at constant distance from wall using wall following PID algorithm, while detecting for front mounted IR and side touch sensors
* If IR detected:
  + Stop strafing
  + Move short distance backwards until IR signal is strongest
  + (?) Adjust robot so parallel to wall using laser readings
  + Spin-up firing motors while doing the adjustments
  + Lift loading servo to firing; check that lifter QRD goes off
    - If QRD still on x seconds after reaching upper position (and IR still detected?), shake servo back and forth near top of range of motion
    - After x attempts, give up and lower servo
  + Wait with collection running for x seconds (possibly strafe in direction ball deflects)
  + Continue strafing
* Detect side wall:
  + Stop
  + Reverse wall following direction