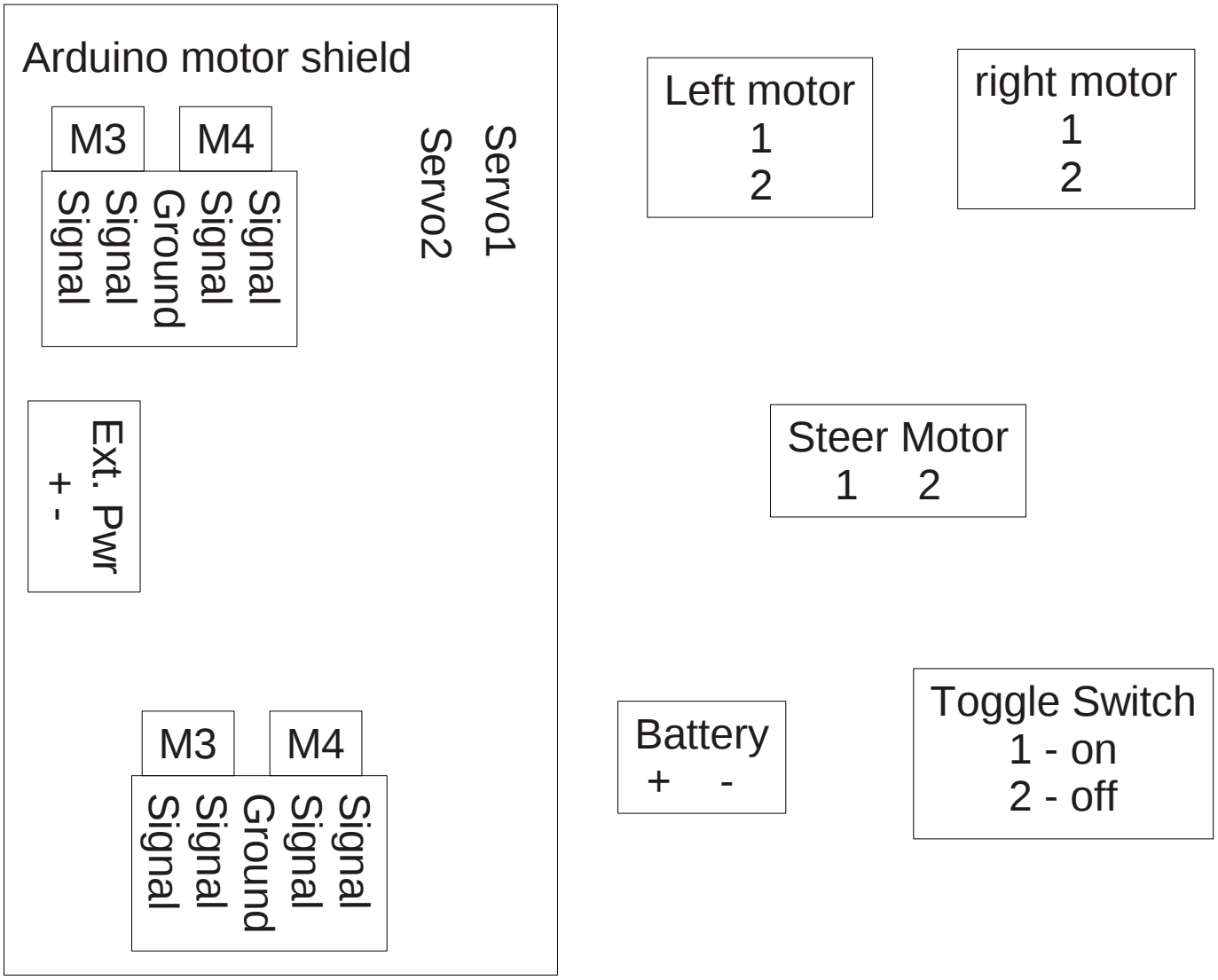
Wiring diagram

Ext. Pwr – hooked to the battery. This is the power that activates the signals on the motor controllers.

The servos are powered by the usb port.

The toggle switch turns power on to the entire circuit, including external power to the motor shield and and the drive and steering motors.

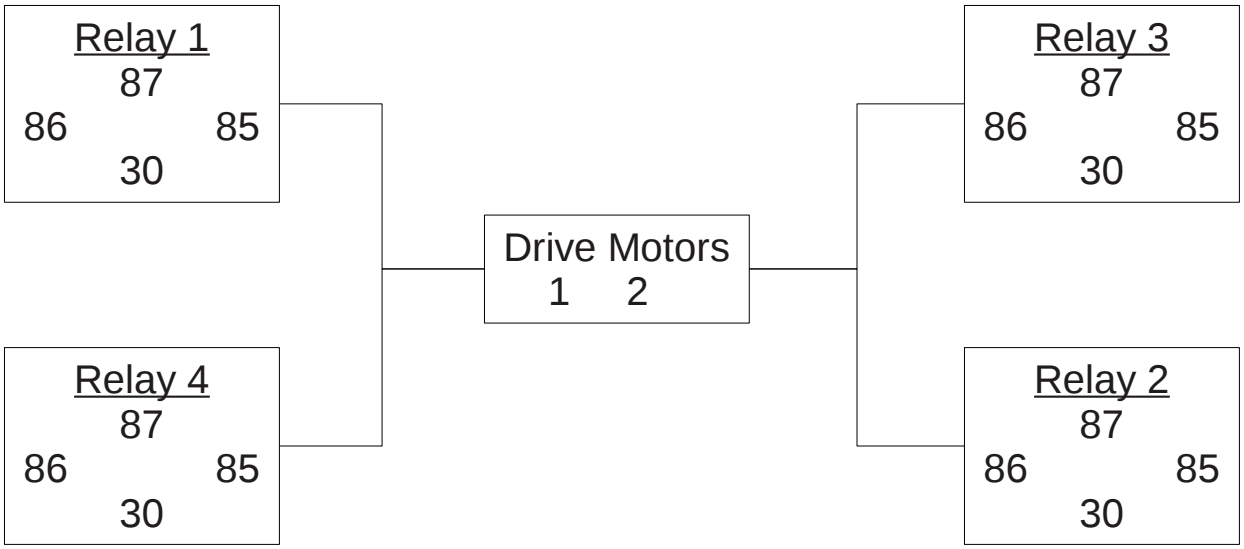


Driving H-Bridge

4 standard automotive relays
Model yh185b
14v dc
60 amp

Both motors run at the same time.
They are opposite of each other, so the top port on one motor is hooked to the bottom port on the other motor. And the bottom port of one motor is hooked to top port of other motor.

The motors run full blast with this circuit – there's no variation in speed, since a relay is either on or off.



1-30	Switch 2
1-30	3-30
1-86	M3 signal 1
1-86	2-86
1-87	Drive motors 1
1-85	M3 ground
1-85	2-85

3-30	1-30
3-86	M3 signal 2
3-86	4-86
3-87	Drive motors 2
3-85	2-85
3-85	4-85

4-30	2-30
4-30	Bat -
4-86	3-86
4-87	Drive motors 1
4-85	3-85

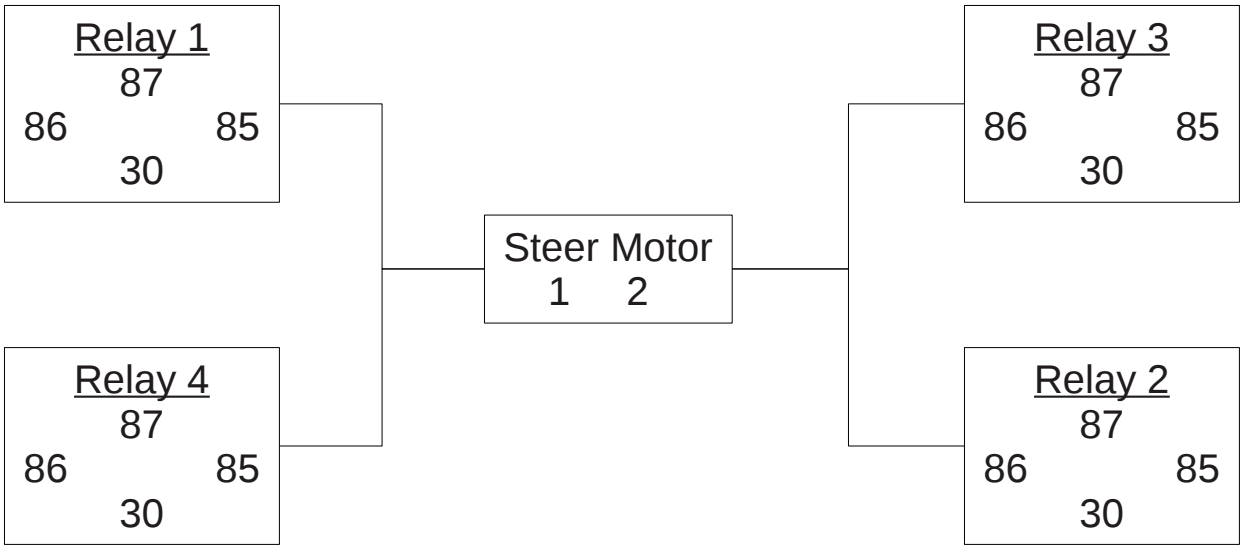
2-30	4-30
2-86	1-86
2-87	Drive motors 2
2-85	1-85
2-85	3-85

Steering H-Bridge

4 standard automotive relays
Model ld1a-12f
12v dc
40 amp

The motor runs full blast. Relays are either on or off, so there's no speed control.

The application user will need to let off the steering once the wheels turn, or there will be damage to the steer motor mount.



1-30	Switch 2
1-30	3-30
1-86	M3 signal 1
1-86	2-86
1-87	Steer motor 1
1-85	M3 ground
1-85	2-85

3-30	1-30
3-86	M3 signal 2
3-86	4-86
3-87	Steer motor 2
3-85	2-85
3-85	4-85

4-30	2-30
4-30	Bat -
4-86	3-86
4-87	Steer motor 1
4-85	3-85

2-30	4-30
2-86	1-86
2-87	Steer motor 2
2-85	1-85
2-85	3-85