

03/22/2017

Gobbit Robot Wiring Example for Line Following


















You will need the Gobbit robot chassis and these additional components:

- Sparkfun Redboard or Arduino Uno
- Sparkfun Ardumoto motor driver shield
- Pololu QTR-8RC RC Reflectance Sensor Array
- Jumper wires

Robot and components available at: <http://www.zagrosrobotics.com/>

Jumper wire connections table (also see diagram on other page):

**** The jumper wire colors noted here are used for clarity, but any color of jumpers can be used. ****

Wire Color <small>(as shown in diagram)</small>	Connect this...	...To This
	Ardumoto Digital pin 2	QTR Sensor pin1
	Ardumoto Digital pin 4	QTR Sensor pin2
	Ardumoto Digital pin 5	QTR Sensor pin3
	Ardumoto Digital pin 6	QTR Sensor pin4
	Ardumoto Digital pin 7	QTR Sensor pin5
	Ardumoto Digital pin 8	QTR Sensor pin6
	Ardumoto Digital pin 9	QTR Sensor pin7
	Ardumoto Digital pin 10	QTR Sensor pin8
	Ardumoto GND	QTR Sensor pin GND
	Ardumoto 5V	QTR Sensor pin VCC
	Ardumoto Terminal A 1	Black wire of Left motor
	Ardumoto Terminal A 2	Red wire of Left motor
	Ardumoto Terminal B 3	Black wire of Right motor
	Ardumoto Terminal B 4	Red wire of Right motor
	Ardumoto Terminal VIN (+)	Load/Outer Switch Terminal
	Ardumoto Terminal VIN (-)	Battery Holder Black Wire (-)
	Battery Holder Red Wire (+)	Common/Middle Switch Terminal

To test your wiring: Install the "Gobbit Line Command" library for the arduino IDE from the Sketch>Include Libraries>Manage Libraries menu (search for gobbit) and upload and run the "MotorDirTest" and "QTRTest" example sketches to confirm your wiring is correct. You will also need to install the QTRsensors and Adafruit Motorshield V2 libraries with the same method.

Video instructions to install the arduino IDE, Redboard drivers, and the Gobbit Line Command library: <https://www.youtube.com/watch?v=cKk6qsHKJO8>

Full video of Gobbit assembly and wiring: <https://www.youtube.com/watch?v=I95pw8utCeY>

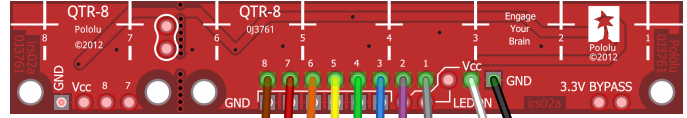
Additional projects and videos at: <http://primalengineering.com/robots/>

****IMPORTANT****

This edge of the QTR Line Sensor should face the front of the robot.

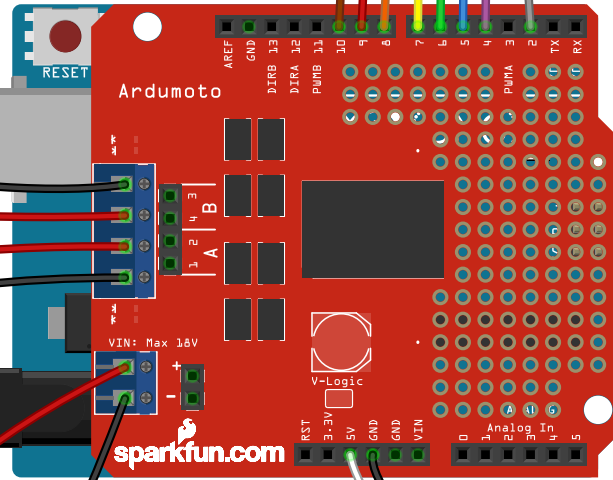
FRONT of Robot-->

Pololu QTR-8RC



M2
Right Motor

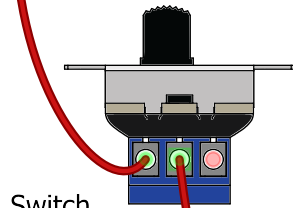
Arduino Uno or Redboard



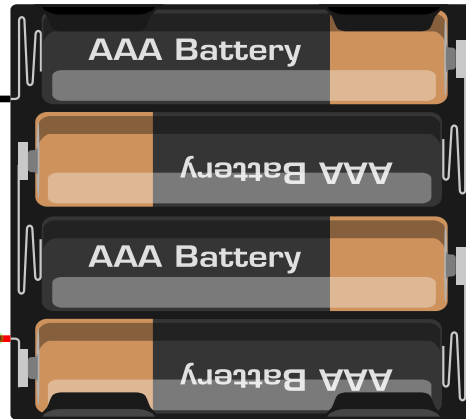
ArduMoto



M1
Left Motor



Switch



Battery Holder