

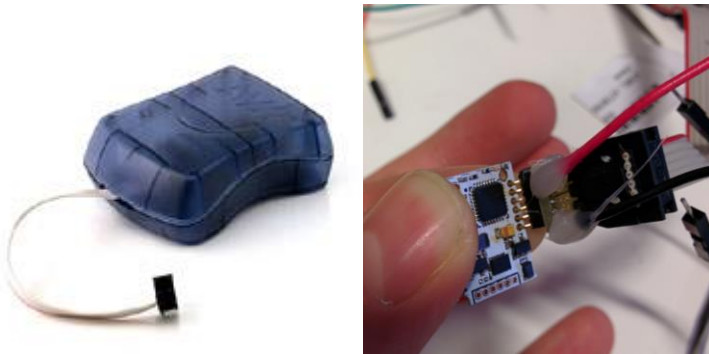
Motor Controller V1.0

About

This is an Arduino ATMEGA328p chip with a motor controller. It can control two motors.

Programming

The board needs AVRISPmkII Programmer, and a programming adapter board. The programming port is on the top. The programming connector can be just press fit into the holes. When programming choose Arduino Pro Mini (3.3V, 8MHZ) w/ ATmega328.



Functionality

The motor 1 connects to AOUT1 and AOUT2 and motor 2 to BOUT1 and BOUT2.

VBUS can be used to power both the microcontroller and the voltage. VBUS powers the motor directly now, there is a jumper R2, which allows to control the motor voltage with a regulator. Now the regular is 5V, but it is bypassed. Vdd is used for digital electronics. The digital electronics are regulated with 3.3V LDO.

The motor speed is controlled by PWM. The maximum speed is given by constant 3.3V, The current code doesn't use hardware PWM because the pins that connected to the motor don't have PWM. So PWM is bit banded now, which is inefficient. The microcontroller doesn't have time to do much else. This will be fixed in the next revision.

