30 Oct 2013 W. Holm

Instructions for using the Pololu AVR ISP programmer with the Arduino IDE to program the OpenROV 2.5 boards

1.) Go to the Pololu web site, download the drivers for the programmer, and install them on your computer.

2.) Download the Arduino IDE and install. I'm using version 1.0.5.

3. Go to the directory C:\Program Files (x86)\Arduino\hardware\arduino

4.) Append the following text to the bottom of the programmers.txt file:

avrispv2.name=Pololu USB (AVRISPv2)

avrispv2.communication=serial

avrispv2.protocol=avrispv2

5.) Append the following text to the bottom of the boards.txt file:

##############################################################

mega2560p.name=Arduino Mega 2560 with Pololu AVR ISP

#mega2560p.upload.protocol=wiring

mega2560p.upload.using=avrispv2

mega2560p.upload.maximum\_size=258048

#mega2560p.upload.speed=115200

mega2560.bootloader.low\_fuses=0xFF

mega2560.bootloader.high\_fuses=0xD8

mega2560.bootloader.extended\_fuses=0xFD

mega2560.bootloader.path=stk500v2

mega2560.bootloader.file=stk500boot\_v2\_mega2560.hex

mega2560.bootloader.unlock\_bits=0x3F

mega2560.bootloader.lock\_bits=0x0F

mega2560p.build.mcu=atmega2560

mega2560p.build.f\_cpu=16000000L

mega2560p.build.core=arduino

mega2560p.build.variant=mega

6.) Plug in the Pololu programmer to your computer.

7.) Probe what serial port is assigned to the programmer

8.) Open the Arduino IDE.

9.) In Tools/Boards, select "Arduino Mega 2560 with Pololu AVR ISP"

\*we’ve been using Arduino Mega 2560 or Mega ADK

10.) In Tools/Programmer, select "Pololu USB"

11.) In Tools/Serial Port, select the serial port that the Pololu programmer is attached to.

12.) Apply power to the OROV controller board. The Pololu ISP cable does not apply power to the target.

13.) Attach the Pololu ISP cable to the ISP port on the board.

14.) Select Tools/Burn Bootloader and wait for the bootloader to be downloaded into the Controller board.

15.) Upload your desired sketch as you normally would in the Arduino IDE. Note that the serial monitor in the IDE will not work.