# Before Starting the CMUcamGUI (KIPR Version) with WINDOWS

1. Close all applications that use the serial port to which the HB is connected (including IC4).
2. Make sure the CMUcam, HB and interface are connected as shown above.
3. Set the dongle switch to the middle position.

# Before Starting the CMUcamGUI (KIPR Version) with MacOS X

1. Make sure the CMUcam, HB and interface are connected as shown above.
2. If not already running, start IC4.
3. Note the name of communications port selected (will start with /dev/…)
4. Set the dongle switch to the middle position.

# Before Starting the CMUcamGUI (KIPR Version) with LINUX

1. Make sure the CMUcam, HB and interface are connected as shown above
2. Set the dongle switch to the middle position.

# Using the CMUcamGUI (KIPR Version)

1. Make sure the setup is correct for your operating system (see above) and that the CMUcam is powered (by turning the HB on).
2. Startup the CMUcamGUI application
3. Type in the name of the com port to which HB interface/charge board is connected to your PC. (for Windows this will be something that starts with "COM" for MacOS and LINUX this will be something that starts with "/dev/").
4. Under Commands menu, select dump frame to get a low-rez image from the camera.
5. Use the camera registers window to change the camera modes and the use "Set Camera Regs" under the commands menu to actually make the switch. Note, that Red Green and Blue are used in RGB mode and Cr, Y and Cb are used in YUV mode.
6. Use the color picker window to note color when mousing over the downloaded image (see step 4).

**Other useful resources:**
**http://www-2.cs.cmu.edu/~cmucam/Downloads/CMUcamManual.pdf**

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