# Petalcontroller Setup Instructions (Version 1.0)

1. **Transferring the petalcontroller image to your beaglebone**
   1. Dowload the image from the docDB and unzip:

https://desi.lbl.gov/DocDB/cgi-bin/private/ShowDocument?docid=2623

* 1. Load the image onto a 4 GB or bigger formatted SD card via a program like Win32 disk imager or the dd command in linux.
  2. Insert the SD card into a powered off beaglebone and power the device up. You will see a back and forth shifting LED pattern which indicates that the image is being transferred (this will take ~20 minutes).
  3. When the LED pattern stops, turn the beaglebone off and remove the SD card. Power it back on and your petalcontroller can now be configured.

1. **Configuring the petalcontroller**
   1. All configuration settings are now found in /home/msdos/dos\_home/dos\_config. The petalcontroller service now starts automatically and initializes the CAN channels/device overlays/petalcontroller service. The following scripts/configuration files are no longer used and have been removed: startpc.sh, caninit.sh, caninit.py, devtree.py, devtree.sh, petalcontroller.ini, and petalcontroller.conf.
   2. Open /home/msdos/dos\_home/dos\_config/start\_PETALCONTROLLER and change the PC# for your device (see comments of this file for namespace). The freshly flashed beaglebone will auto-start as PC99. The number 99 will be reserved for newly flashed devices to avoid disturbing existing petalcontrollers.
   3. Please update the wiki so that we can keep track of the hosts (https://desi.lbl.gov/trac/wiki/DOS/LBNLhosts). The naming scheme that has been proposed is:
      * **Real petals that go on the mountain:** 0-9
      * **Reserved for EM petals or other full petals:** 10-19
      * **Reserved for UM test stands:** 20-39
      * **Reserved for LBL test stands:** 40-59
      * **Reserved for overflow/TBD:** 60-99
   4. If using the database, link setup\_site.sh to your site specific setup file (currently generic site file is used). If needed, set the host name in /home/msdos/dos\_home/dos\_config/setup\_dos.sh.
2. **Useful commands for monitoring the petalcontroller service**
   1. **‘sudo systemctl restart/start/stop autoDOS’** – restarts, starts or stops the autoDOS service on the petalcontrollers
   2. **‘doslogs –f’** – shows messages from the petalcontroller service
3. **Running the positioner control GUI**
   1. The positioner control GUI is run with the command ‘poscontrol’ from any directory (once you SSH into the beaglebone with the –Y flag set). No petalcontroller number is passed in as an argument since this information is now read from start\_PETALCONTROLLER. The GUI can now run positioners on different CAN buses, though the syntax for this still needs to be finalized.