Software Setup for Mac OS

Tutorial



These instructions are legacy for the V1. If you have a V2 machine please do NOT follow these instructions as they will not work! Follow the Software Startup Tutorial for V2 found on support.pocketnc.com.

Note: There are USB communication bugs in Mac OSX 10.11.1 and 10.11.2. If you haven't yet upgraded, we suggest you wait until later releases to avoid these issues. If you have upgraded, use <u>this</u> <u>guide</u> as a work around for now.

Download and install the following:

- <u>XQuartz</u> 2.7.7
- BeagleBone HoRDNDIS
- BeagleBone FTDI

*Note: In newer versions of OSX you may have to override settings to allow the install of the drivers. You can learn how to do that <u>here</u>.

To use the machine:

- Turn on your machine and connect via USB to your computer.
- Open X Quartz. See the icon below. If it isn't shown in the applications window, look for it in the "Utilities" folder which is nested under the "Applications." See the screenshots below.



Favorites	App Store	Automator	Calculator	17 Calendar	Chess	Contacts	Dashboard	Dictionary	DVD Player	FaceTime	Font Book
Coogle Drive Desktop Documents Downloads	Google Chrome	Google Drive	iBooks	Image Capture	ITunes	Launchpad	Mail	Maps	Messages	Mission Control	Notes
Devices C Remote Disc Tags Red Orange Yellow Green Blue Purple Gray	Photo Booth	Photos	Preview	QuickTime Player	Reminders	Safari	Siri	Stickies	System Preferences	TextEdit	Time Machine
All Tegs All Tegs Activity Monitor Keychain Access	AirPort Utility	Audio MIDI Setup	Bluetooth File Exchange	e Boot Camp Assistant	ColarSync (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Utility Co	ARNIT 7:36 Innsole	Digital Color- Meter	Disk Utility	Grab	Grapher

This will also open X Term which you will use to connect to the machine.

Login into your Pocket NC using the command "ssh -Y pocketnc@192.168.7.2".

The password for the machine is "pocketnc". Note that when you type the password, you will not see characters appear.

000

X pocketnc@pocketnc: ~

bash-3.2\$ ssh -Y pocketnc@192.168.7.2 Debian GNU/Linux 7

BeagleBoard.org Debian Image 2015-02-01

Support/FAQ: http://elinux.org/Beagleboard:BeagleBoneBlack_Debian

```
default username:password is [debian:temppwd]
```

```
pocketnc@192.168.7.2's password:
Last login: Sun Feb 1 18:45:24 2015 from 192.168.7.1
pocketnc@pocketnc:~$ PocketNC]
```

Now that we have tested that the SSH connection works, we can test that Xming is

working by entering the command **PocketNC** (it is case sensitive).

Ocketnc@pocketnc: ~

bash-3.2\$ ssh -Y pocketnc@192.168.7.2 Debian GNU/Linux 7

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default username:password is [debian:temppwd]

```
pocketnc@192.168.7.2's password:
Last login: Sun Feb 1 18:45:24 2015 from 192.168.7.1
pocketnc@pocketnc:~$ PocketNC
MACHINEKIT - 0.1
Machine configuration directory is '/home/pocketnc/linuxcnc/configs/ARM.BeagleBo
ne.PocketNC'
Machine configuration file is 'PocketNC.ini'
Starting Machinekit...
io started
halcmd loadusr io started
PocketNCdriver overlay found
cape-bone-iio overlay found
task pid=3090
emcTaskInit: using builtin interpreter
```

• After several seconds you should see LinuxCNC's AXIS window appear,

PocketNC uses this program as its CNC control interface.

🗙 axis.ngc - AXIS with MachineKit 0.1 on PocketNC								
<u>Eile M</u> achine <u>V</u> iew <u>U</u> ser <u>H</u> elp								
😣 💽 🗁 🤌 🛯 💭 🚺								
Manual Control [F3] MDI [F5]	Preview DRO							
Axis: © X C Y C Z C A C B - + Continuous • Home All Touch Off Override Limits	X: -0.0000 DTG X: 0.0000 Y: 0.0000 DTG Y: 0.0000 Z: 0.0000 DTG Z: 0.0000 A: 0.0000 DTG A: 0.0000 B: -0.0000 DTG B: 0.0000 G53 X: 0.0000 G92 X: 0.0000							
Spindle: 🌇 Stop	G53 0.0000 G92 Y: 0.0000							
- + 1	653 Z. 0.0000, 692 Z: 0.0000							
	G53 A: 0.0000 G92 A: 0.0000 G53 B: 0.0000 G92 B: 0.0000 G53 R: 0.0000							
	G53 B: 0.0000 G92 B: 20,0000							
	TLO X: 0.0000							
Feed Override: 100 %	TLO Y: 0.0000							
Spindle Override: 100 %	TLO A: 0.0000							
Jog Speed: 30 in/min	TLO B: 0.0000							
Jog Speed: 1232 deg/min								
Max Velocity: 39.8 in/min								
1: (AXIS "splash g-code" Not intended for actual milling) 2: (To run this code anyway you might have to Touch Off the Z axis) 3: (depending on your setup. As if you had some material in your mill) 4: (Hint jog the Z axis down a bit then touch off) 5: (Also press the Toggle Skip Lines with "/" to see that part) 6: (If the program is too big or small for your machine, change the scale #3) 7: G21 G90 G64 G40 8: 9: G00 Z3.000000								
OFF No tool	Position: Relative Actual							

 Test out your machine by turning E-stop off, Machine Power on, and clicking on Home All. For the next steps to get going machining, see the <u>Uploading and</u> <u>Deleting Files tutorial</u> and the <u>AXIS Overview tutorial</u>. Finally, when it's time to close up shop for the day you can power down the
Pocket NC machine by closing the AXIS window, and from the console window
enter sudo halt & exit this will we initiate the shutdown process and close the
SSH connection on the way out.