Artisan/TC4 driver installation for Windows   9/17/13

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This procedure was written for the Arduino Uno board with the TC4 shield. Please check the Arduino site for software if you are using a different model. I have not tested it, but this procedure should also work with the TC4C board which is an all in one board combining a TC4 and Arduino.

PART 1

Load the Arduino IDE software:

 **(All Screens shown Windows 7) it will look different for other versions.**

Do not plug the Arduino into the USB port at this time.

You might want to unplug all USB devices until the procedure is complete (just in case).

Download the latest Arduino installer file from: http://arduino.cc/en/Main/Software.

Version 1.0.5 is used at this writing.

Choose the **Windows Installer**. It is much easier to install than downloading the zip file. Running the Installer should show the following screen after the license agreement:
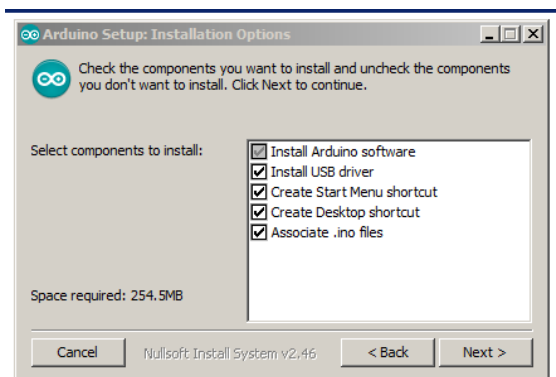
Leave everything as is and click next. On the next screen, leave the Destination Folder as is and click Install. If it asks to load the Arduino USB driver select install. Click close to complete.

Once the Arduino software loads and is complete, plug the Arduino into the USB port on your computer.

XP Users:

XP users will get a screen "New Hardware Wizard"

*Select ---> "**Install from a specific location. (Advanced)**"*

*Next screen: Select ---> "**Don't search. I will choose the driver to install**"*

*Next Screen: "**Arduino Uno**" should appear in the device list. Select: **Next**.*

*Click **finish** to complete.*

Windows 7 Users:

Windows 7 should see it and connect using the loaded driver. If it tries to use Windows update to find it, click on the blue highlighted text "**Skip obtaining driver software from Windows update**" and let it use the loaded (local) driver. You should get the following screen (**Windows 7**):
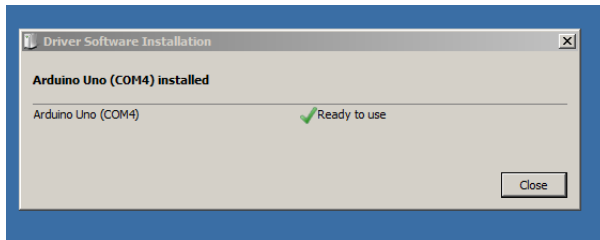
Make a note the COM port number it used. *This number may be different than shown*.

Click close

Check the Device Manager to see if the Arduino driver is present:

XP Users: Start--> Control Panel--> System--> Hardware--> Device Manager Tab.

Select Ports (Com & LPT) in the list.

Arduino Uno(COMX) should be there (X= com number assigned)

Windows 7 Users: Start--> Control Panel ---> Device Manager ---> Ports and it should display "**Arduino Uno (COMX)**" - X = whatever number was assigned.
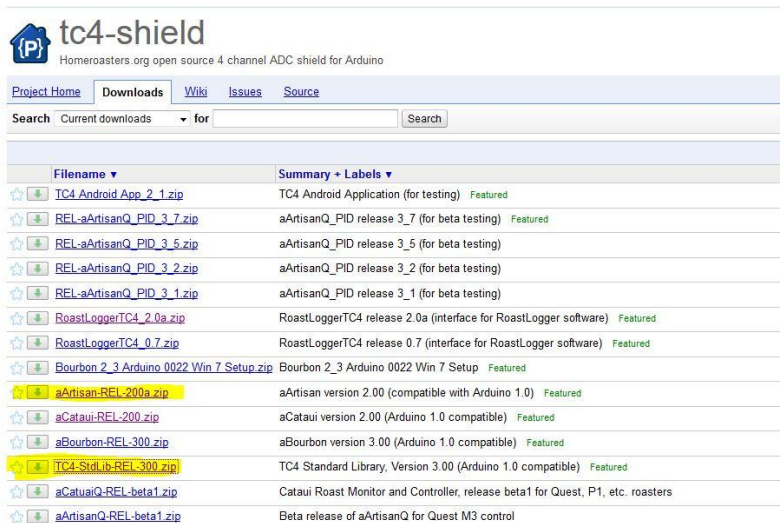
Part 2

Load the aArtisan TC4 Sketch file and libraries

Now that the Arduino IDE software and USB driver is installed, the aArtisan TC4 "Sketch" file and Arduino TC4 standard library files need to be loaded. This is the software that runs in the Arduino and passes data from the TC4 board to the Artisan application.

Download the latest Artisan TC4 sketch from:

http://code.google.com/p/tc4-shield/downloads/list

Choose the file "aArtisan-**REL-200a.zip**". This is the latest version as of this writing. Click on the **green down arrow** to the left of the filename to download. Save to your desktop and extract the zip to a directory. Do the same for the library files "**TC4-StdLib-REL-300.zip**" saving and extracting to a directory on your desktop.
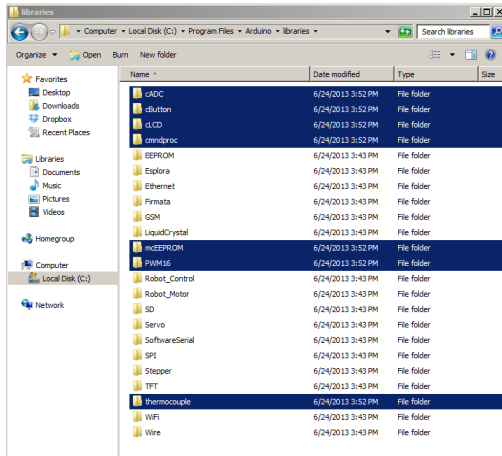
You will need to copy all the library folders in the **TC4-StdLib-REL-300** folder (7 total) to the Arduino software Libraries folder location "**C:/Program Files/Arduino/Libraries**" as shown:
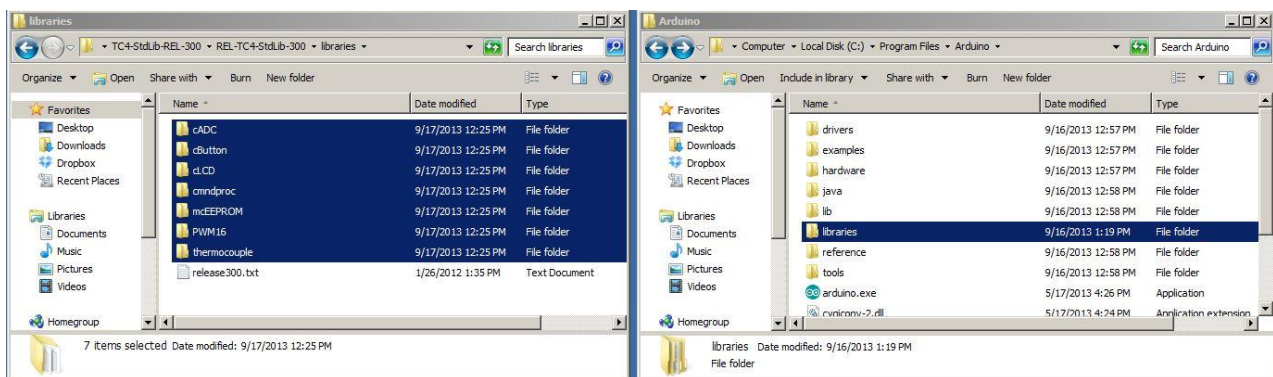
The result of the copy: Your **C:/program Files/Arduino/Libraries** folder should look like this:

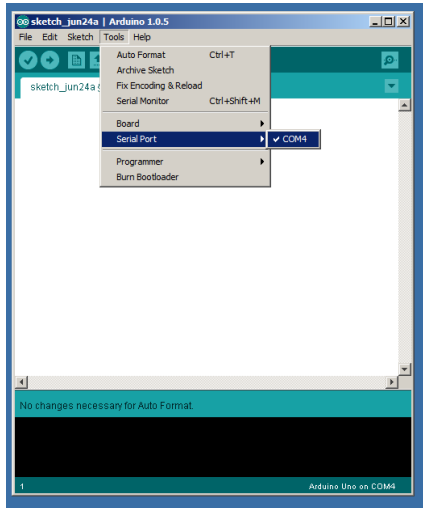The highlighted folders you copied are for the TC4.

Now that the libraries are in place we can now load the aArtisan TC4 Sketch. Run the Arduino application and make sure the Arduino is selected to what model you have (Arduino Uno in the example)
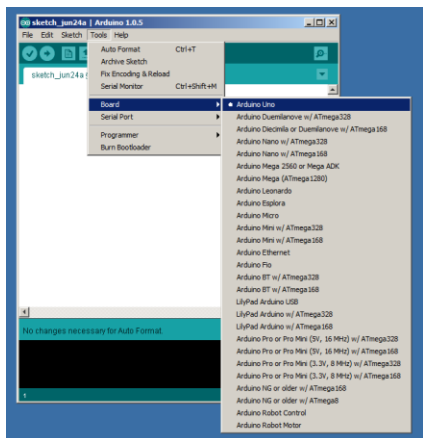
Also make sure the COM port is correct and selected. A check mark should be next to COM, if not then click on it:

Next, load the TC4 Sketch located in the "**aArtisan-REL-200/aArtisan"** directory we downloaded and unzipped earlier:
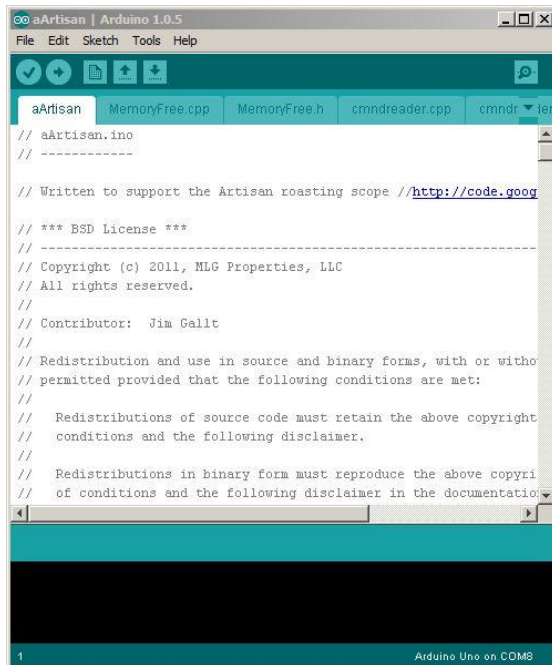
**File -->Open-->aArtisan.ino (or it may show as just aArtisan)**
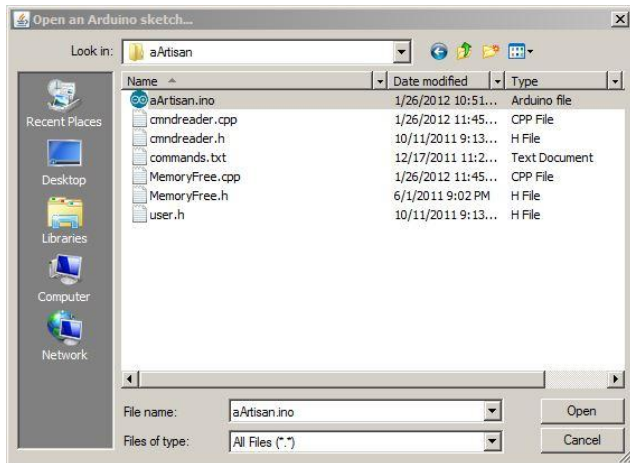
This is what you will see when it loads:

Now we need to compile at first to see if the libraries are in place.

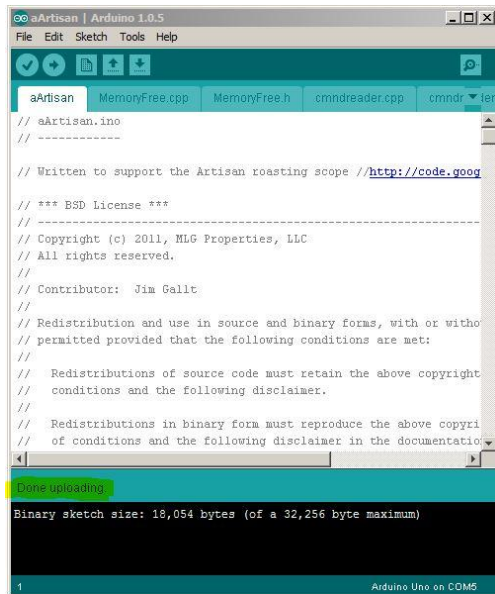Select at the top menu **Sketch --> Verify/Compile**:

You should get "done compiling" at the bottom of the screen if not re-check your TC4 library file locations. All 7 TC4 library folders should be in the Arduino/libraries folder.
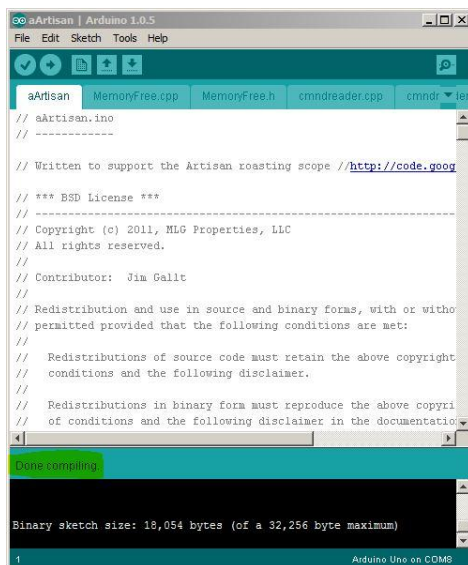
Now select **File --> upload** to send the program to the Arduino:

"Done uploading" should be displayed on the bottom.

If you have the optional LCD Adapter for the TC4, It should initialize and display "**aARTISAN V2.00**" for a second. Then you should see roughly the following (I had no thermocouples attached):

PART 3

Testing the installation

If you do not have the LCD option, another test is to run the Serial Monitor in the Arduino program.

With this test, we can see if the TC4 responds to commands and that all four channels and the ambient IC is working
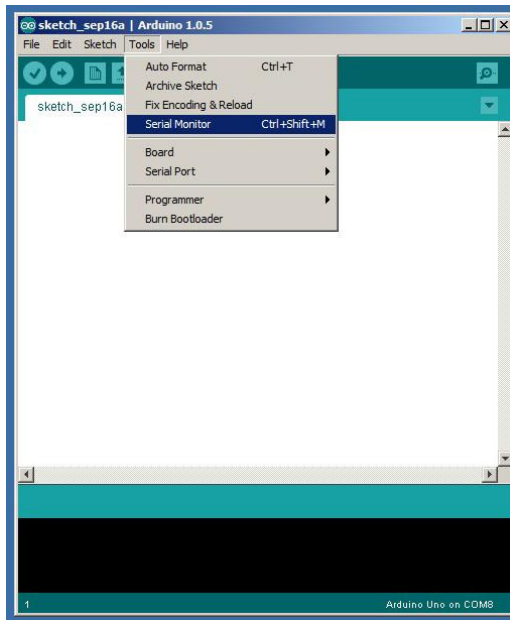

Make sure the right Com port is selected (*yours may be different*) and select a baud rate of **19,200** from the drop down menu. Also select **Newline** at the bottom.
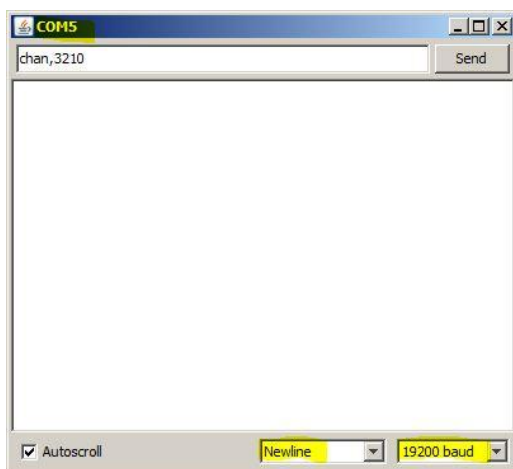
First, we will see if all four TC4 channels are working. Type **chan,1234** and click **send**. You should get a response: **# Active channels set to 1234** as shown. This assigns each of the TC4's logical channels *(chan1, chan2, chan3, chan4)* to a physical port *(TC1, TC2, TC3, TC4)*. In this case, TC1 = channel1, TC2=channel2 etc.
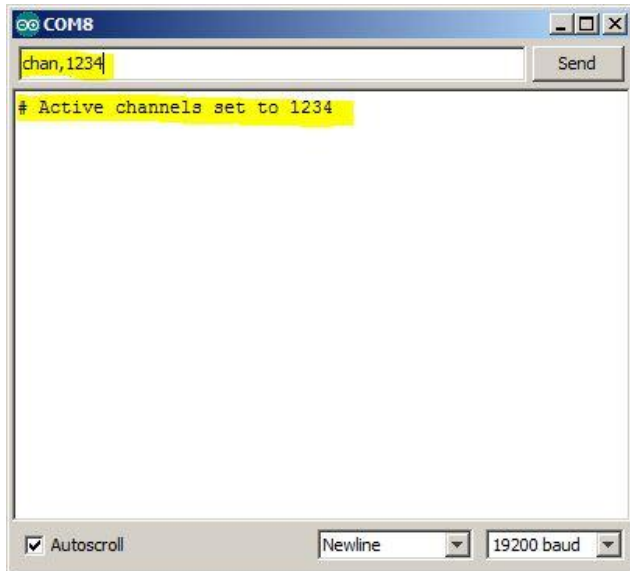
Next we send a read command to see the temperature values. Type **read** and select Send.
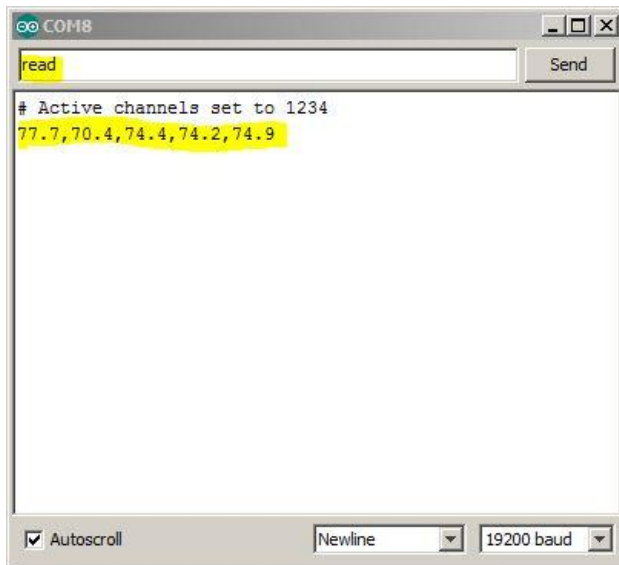
The output is the *ambient temperature* followed by a comma separated list of temperatures in current active units in logical channel order: *ambient, chan1, chan2, chan3, chan4*. *The only time you get a new temperature reading is when you send a read command. **It does not send values continuously like the RoastLogger sketch does.***
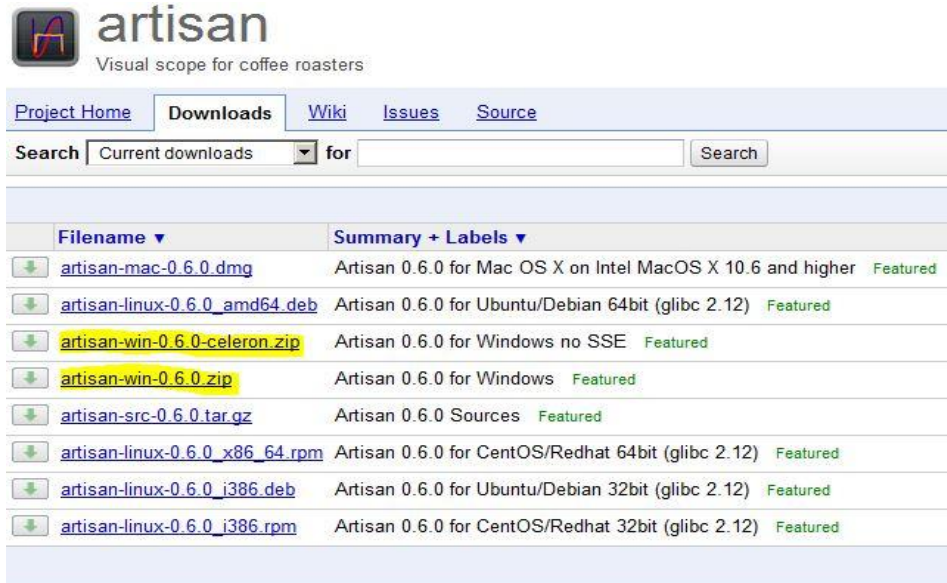
PART 4

Loading the Artisan application

Download the latest Artisan application for Windows at:

http://code.google.com/p/artisan/downloads/list

You can download **artisan-win-0.6.0.zip** or if you have a slower computer, the **artisan-win-0.6.0-celeron.zip.** Click on the **green down arrow** to the left of the filename to download. Save to your desktop and extract the zip to a directory. (I am using the Celeron version for this document). I used a directory called **artisan-win-0.6.0-celeron**.

Open the artisan-win-0.6.0-celeron directory and run the artisan setup program as shown:
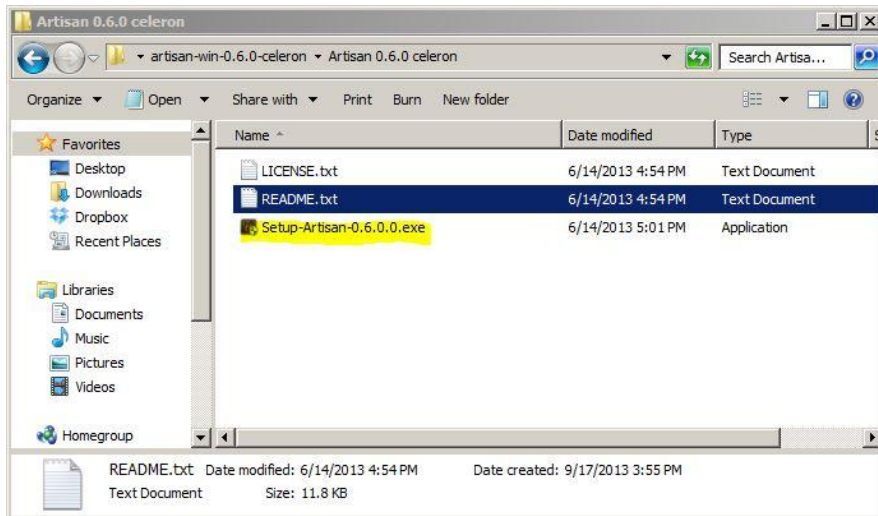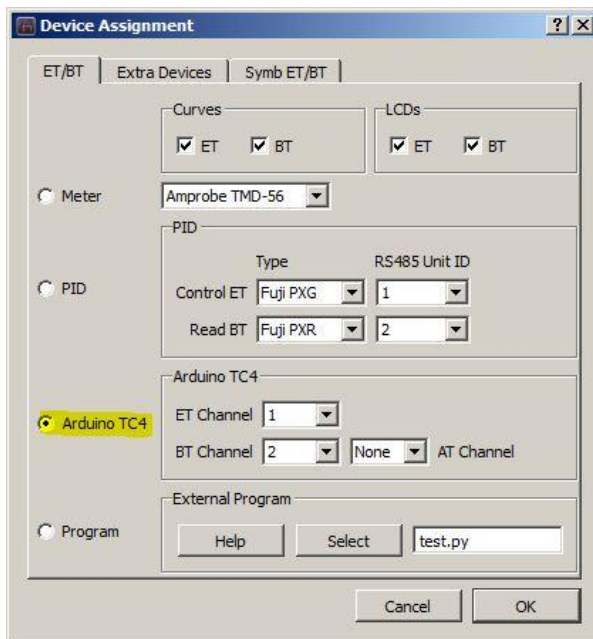

Click install to continue using the default settings.

When it is done, click Finish. There should now be an Artisan icon on your desktop.
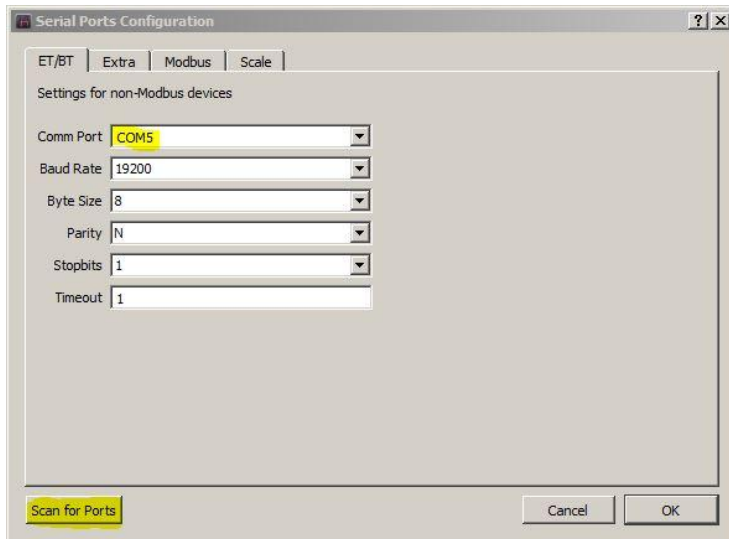
Click the desktop icon to start Artisan.

Select **Config** at the top menu and select **Device**. Make sure **Arduino TC4** is selected:

Click OK and the next screen displays the Port settings:

Click on **Scan for ports** at the bottom. It should then display the same COM port number found earlier in the Sketch procedure. Leave the other settings as is. Click OK to accept the settings.

Click **ON** at the main window and it should display temperatures on the right side of the window. Select **START** and it should start drawing lines at the bottom left of the screen as shown:
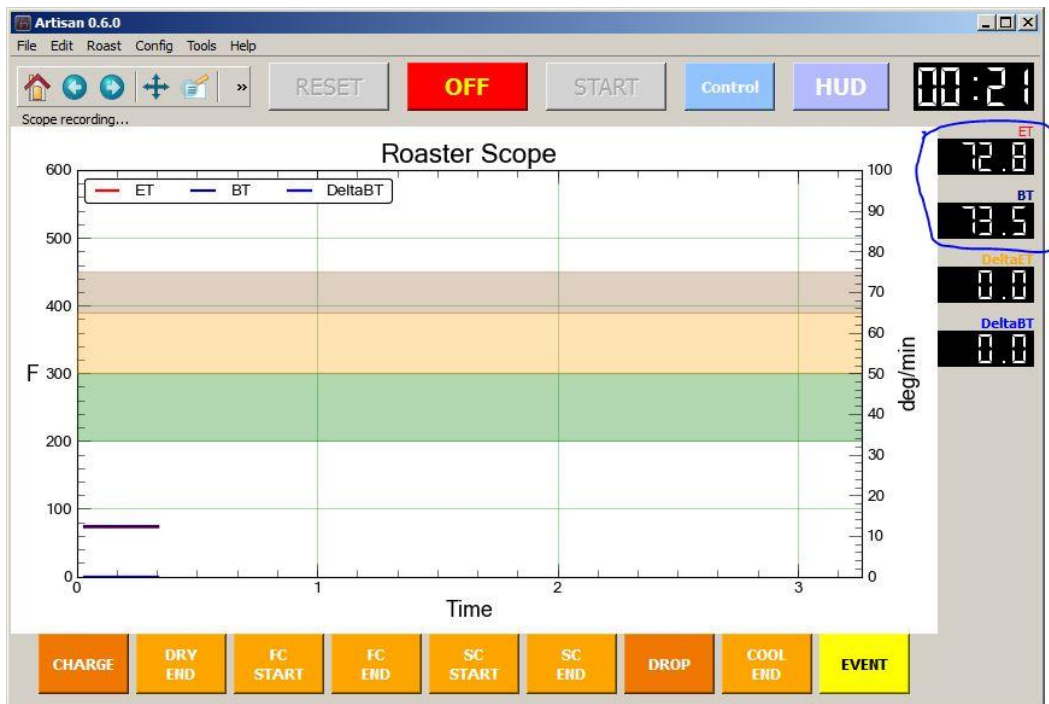
This was just some basic instructions to get started and mainly for loading the aArtisan Arduino TC4 sketch and to see if everything is working.

For more information, Artisan documentation is available at:

http://coffeetroupe.com/artisandocs/