Update the "Flame Tame machine" with MAC OSX

http://flame.fortschritt-musik.de

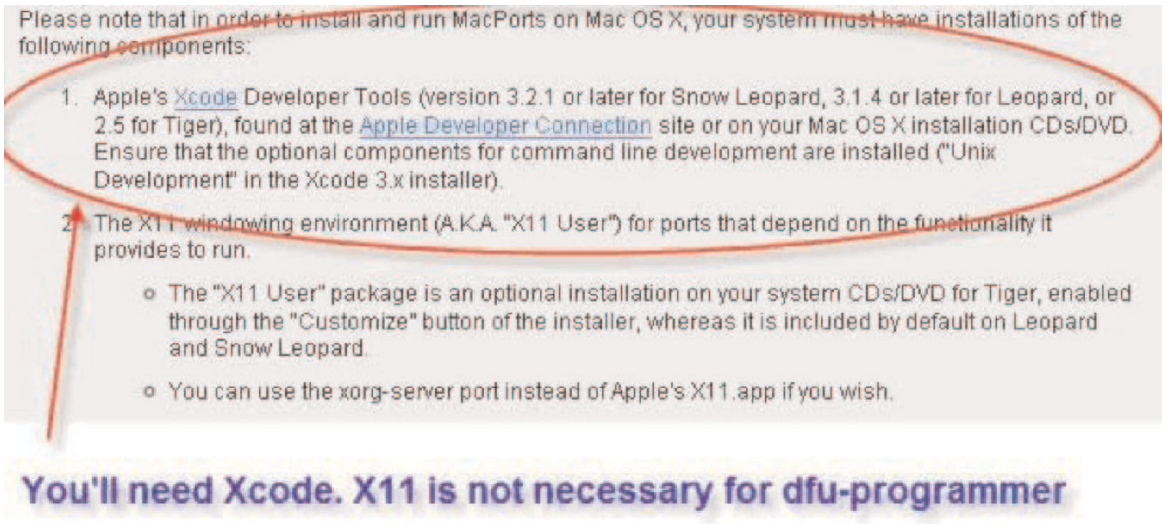
Here are the steps to get it on to the Mac:

1. Check your admin rights

Before you start check that you are the "root" user (sudo) of your MAC! (you need later your admin keyword from your computer). More informations here: **http://support.apple.com/kb/ht1528**

2. Download and Install XCode

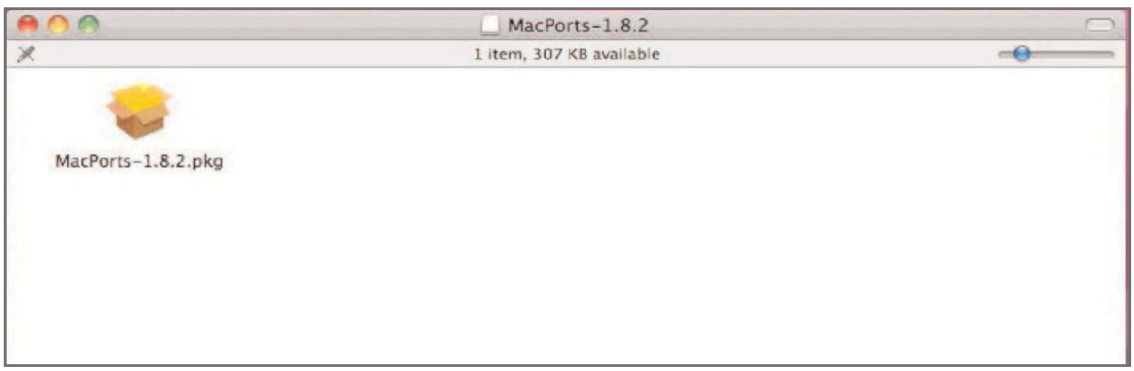
You'll need to install the MacPorts installer which is a package manager for software thats ported to the Mac from other OSes. MacPorts will take care of the build and dependencies for you, but you'll need to have XCode first for the build environment. You can find the MacPorts requirements list at the following site: **http://www.macports.org/install.php**



To download XCode, you'll need to go to the Apple Developer's website:
http://developer.apple.com/technologies/xcode.html
Once at the Apple Dev website, look for the XCode for Mac development. It will require registration as an Apple developer and then a rather large download on to your Mac. Once downloaded, install XCode.

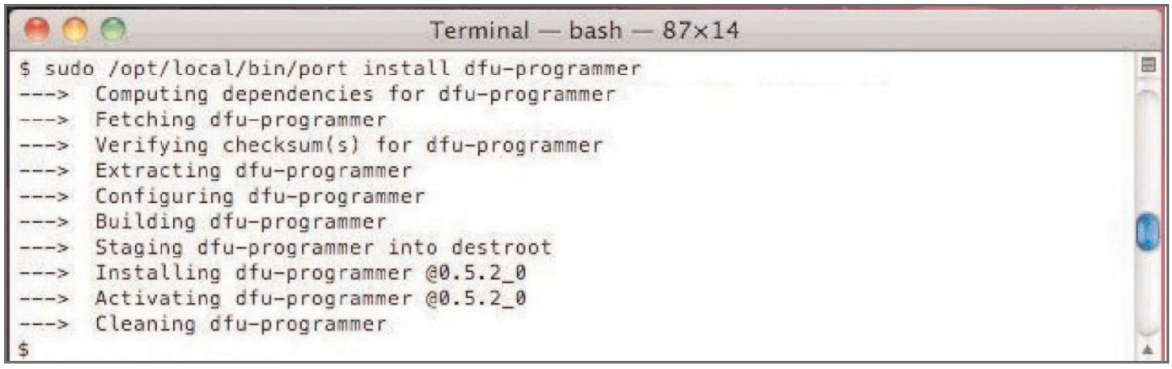
3. Install MacPorts

MacPorts is an open source project to manage the building and installation of open source packages for the Mac. Its similar to the Ubuntu package manager where you just type the port you want at the command line and it will retrieve the source code, build it, and install it on to the Mac. There are "dmg" disk images for Snow Leopard, Leopard, and Tiger and you just need to choose which OSX version you're running. The information about MacPorts is here:
http://www.macports.org/install.php
Once you click on the OSX version, you'll download the "dmg" image which will open to reveal a package. You just need to double click on the package to install MacPorts.



4. Get dfu-programmer and install it

Now that the infrastructure is set up, you can just grab dfu-programmer from MacPorts and install it. To do that, you'll need to go to the Mac Terminal window to get to the command line. Once in the command line type: `sudo /opt/local/bin/port install dfu-programmer`



5. Restart the terminal

This might be a little facetious, however I found that the path wasn't updated in the Terminal window after dfu-programmer was installed. To get it to work, you'll need to close and reopen the terminal so that it will have the updated path. Then the OS should be able to see dfu-programmer and you can use it from whatever directory you're working in.

6. Connect USB and set the Tame machine in bootloader mode

Before you run dfu-programmer you have to connect/set the Tame machine hardware:
- power down the unit
- set the jumper left by the USB jack in direction of the USB jack
- connect the unit with the USB cable to your MAC
- power on the unit

7. Run dfu-programmer with the new flame firmware

Before download the new firmware file (you can download all versions from flames website). Copy the HEX file in your user root directory (your home folder). Once in the terminal command line type:

```
dfu-programmer at89c5131 erase &&
dfu-programmer at89c5131 flash --debug 1 filename.hex &&
dfu-programmer at89c5131 reset
```

Advice: <filename.hex> is the name of the latest firmware file you will find on the web site of flame. Please note the correct file location of the HEX file (copy it in your home folder).
After the correct flashing you have to get following message on your terminal like this:

```
Validating ....
10055bytes used (30.69%)
```

Troubleshooting:

`Error opening the file.Something went wrong with creating the memory image.`
If you have this error message, then the dfu-programmer can't find the HEX file. Check the correct file location of the HEX file (the file have to copy in your home folder).

8. Restart the tame machine

- power down the tame machine,
- disconnect the usb cable
- set the jumper back in play position (from the usb up)
- while power on the module, please hold down the mini-keyboard switches C and B pressed as long as the key switch F starts gleaming red.
- let loose the switches - now the internal memories will be reset
- advice: this transcribes the user scales