

Update the "Chord machine module" 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>



You'll need Xcode. X11 is not necessary for dfu-programmer

To download XCode, you'll need to go to the Apple Developer's website:

<http://developer.apple.com/technologies/xcode.html>

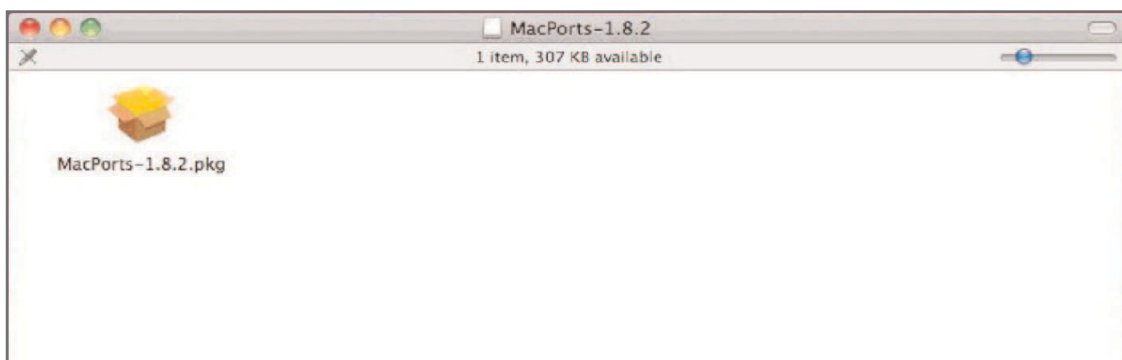
Once at the Apple Dev website, look for the XCode for Mac development. It will require registration as an Apple developer and then a rather large download on to your Mac. Once downloaded, install XCode.

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>

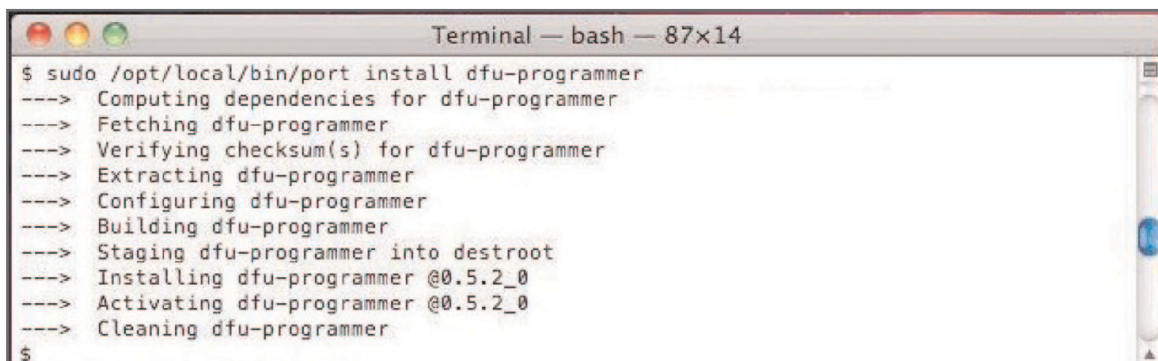
Once you click on the OSX version, you'll download the "dmg" image which will open to reveal a package. You just need to double click on the package to install MacPorts.



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
```



```
Terminal — bash — 87x14
$ sudo /opt/local/bin/port install dfu-programmer
---> Computing dependencies for dfu-programmer
---> Fetching dfu-programmer
---> Verifying checksum(s) for dfu-programmer
---> Extracting dfu-programmer
---> Configuring dfu-programmer
---> Building dfu-programmer
---> Staging dfu-programmer into destroot
---> Installing dfu-programmer @0.5.2_0
---> Activating dfu-programmer @0.5.2_0
---> Cleaning 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 module in bootloader mode

Before you run dfu-programmer you have to connect/set the hardware:

- power down the unit
- set the jumper by the USB jack in left position (LOAD)
- 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 module

- power down the module
- disconnect the usb cable
- set back the jumper by the USB jack in right position
- while power on the module, please hold down the push button OK pressed as long as both LED's CHORD Bank blink (after the LED sequence)
- let loose the button - now the internal memories will be reset

Now the update is finished.