

# ADDAC

# System

ADDAC101 & ADDAC111 .WAV PLAYERS  
GUIDE TO FIRMWARE UPDATE

Revision.01 February.2018

## .WAV Players Firmware Update

Revision.01 February.2018

### Requirements

For the Firmware Update process you'll need:

Download either OSX or Win firmware packages

ADDAC Firmware Update Kit:

<http://addacsystem.com/product/addac-accessories/addac0016>

\*Our Kit contains all necessary parts for the update process:

A Serial to USB adapter board and required jumper wires

If you already have one Serial to USB adapter then you won't need the Firmware Kit and can use your own.

#### Notes on Serial Adapters:

There are lots of different options of USB to Serial Adapters, if you're looking to get your own ebay has very cheap ones, look for those mentioning something like:

FT232RL USB To Serial Adapter Module

USB TO 232 For Arduino



If you're getting them this way don't forget to also get some male to female jumper wires.

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### Upgrading Firmware Physical Setup

#### Initial Setup:

1. Have your Modular turned off and do not plug the USB-Serial adapter to your computer yet.
2. Detach your Module from the frame, while keeping the ribbon power cable connected to a bus board. An advice is to plug it to a bottom row and leave it standing on your desk with easy access to its back.

#### Connections:

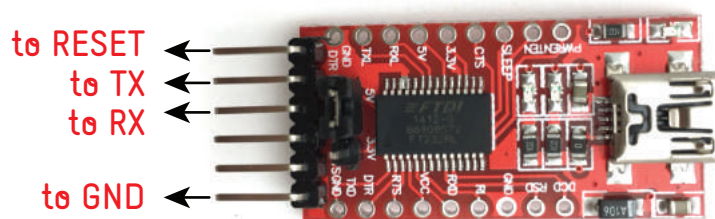
3. On the back of the module, locate the following 4 pins: RX, TX and GND.

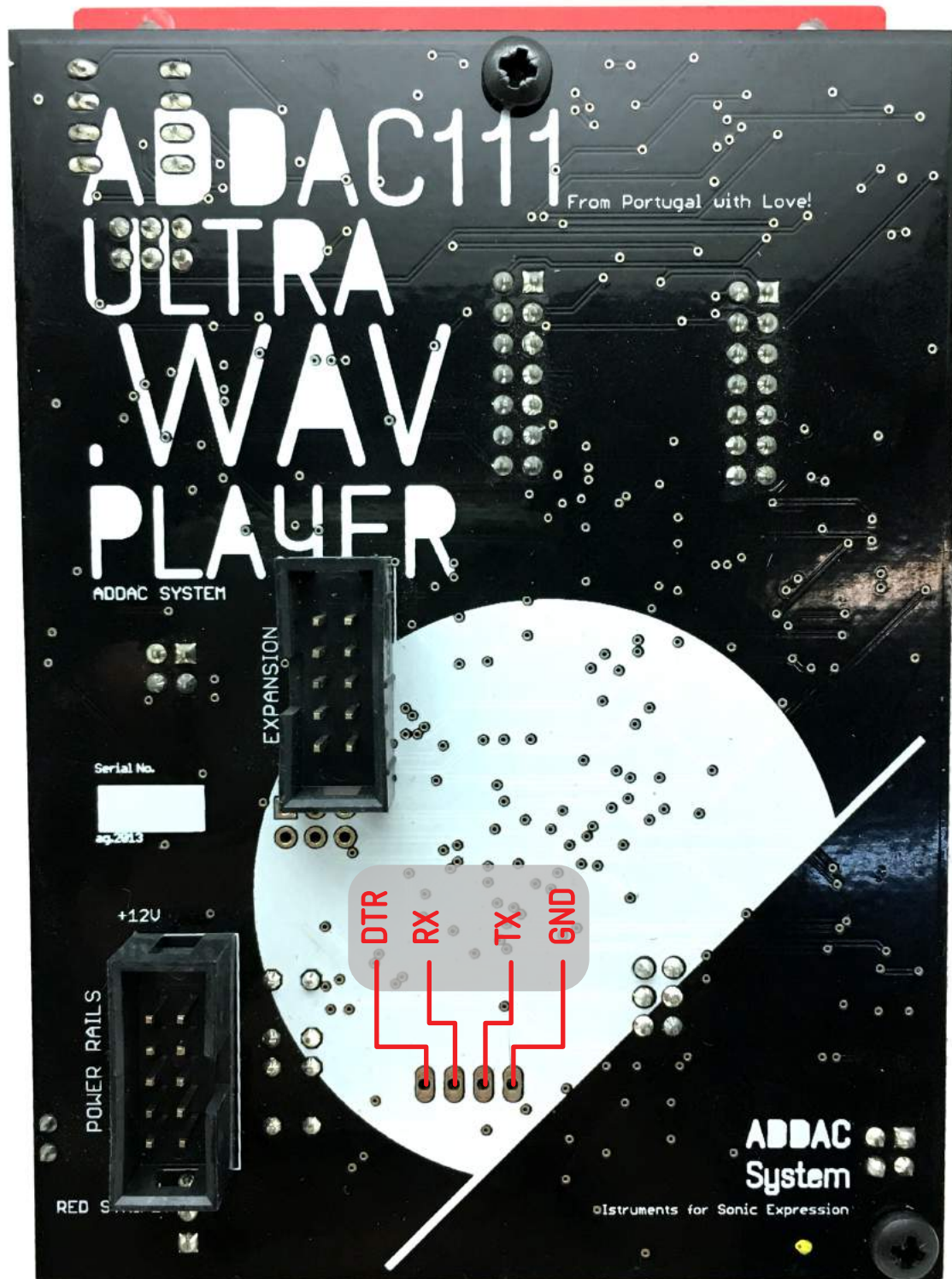
#### Connecting the USB to Serial Adapter:

3.1 Using a standard (FTDI, rs232) USB-to-Serial adapter, locate the pins RXI, TXO, GND and DTR. Connect both GND together, and the RX and TX pins to the inverse matching pins of your module, i.e. RX->TX and TX->RX.

#### FOR ADDAC111 ULTRA .WAV PLAYER:

Also connect DTR pin to module's RESET via.





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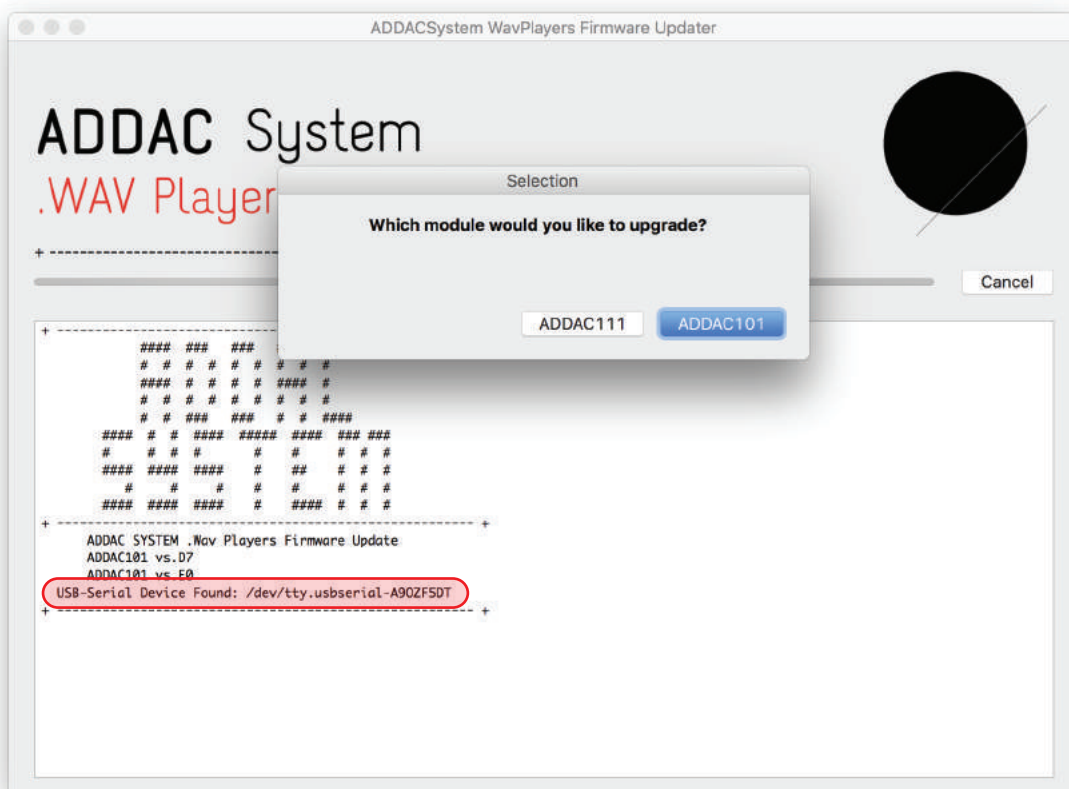
### Upgrading Firmware on OSX

#### Requirements

- Download Latest Firmware App: [http://media.addacsystem.com/firmwares/ADDAC\\_WAV\\_FIRMWARE.zip](http://media.addacsystem.com/firmwares/ADDAC_WAV_FIRMWARE.zip)
- Download Serial to USB Adapter Driver: <http://www.ftdichip.com/Drivers/VCP.htm>

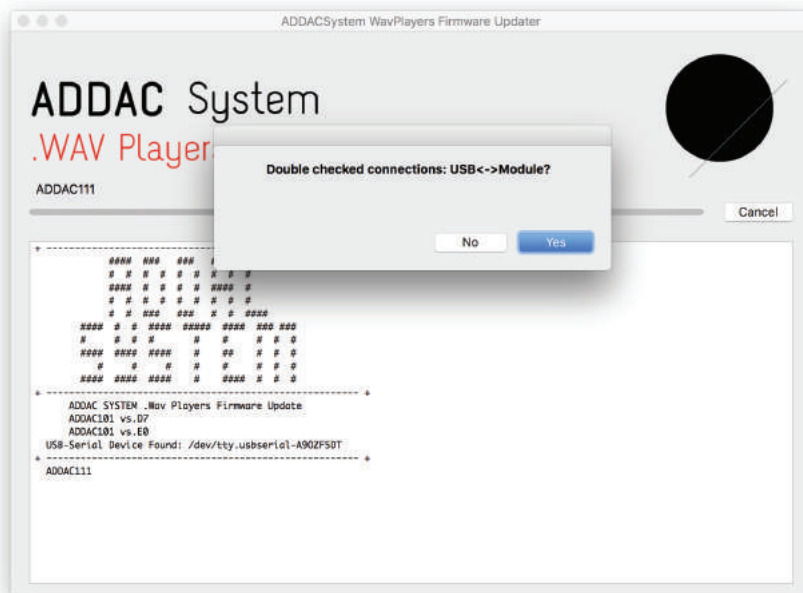
#### Firmware upgrade process:

1. Make all connections required like described in previous pages and keep your modular On.
2. Download the latest firmware app file and unzip it.
3. If you never used the Arduino software before please download and install the appropriate driver.
4. Plug your Serial-USB adapter to your computer and open the App provided.

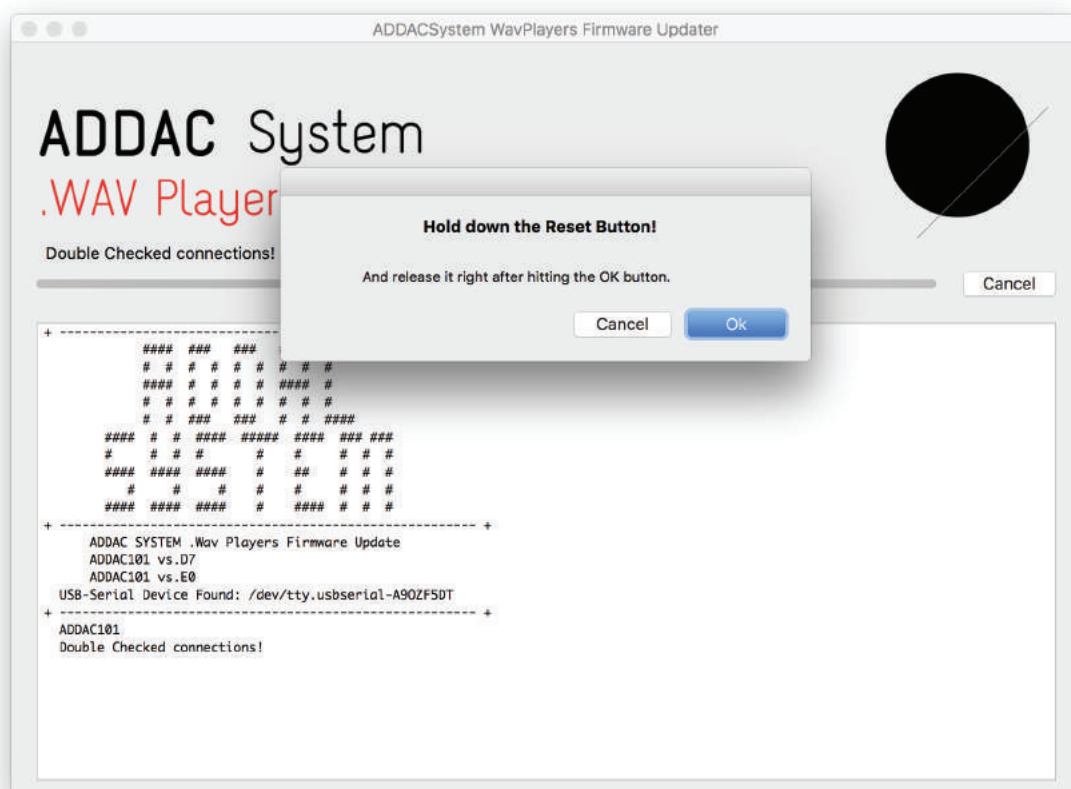


5. This is the App initial screen. Notice that, if all is well, there will be A USB-Serial Device Found in this case: /dev/tty.usbserial-A9SVFDXX. Every USB to Serial adapter have it's own unique ID so yours will have a different name but will follow the same type of name format. If no device appears here then most probably you're missing the adapter driver.
6. After checking that the USB to Serial device is detected choose the Module you'd like to Update.

7. The App will then flash one pop-up dialog boxes alerting you to make sure you've done your physical connections, press Yes if you're ready.

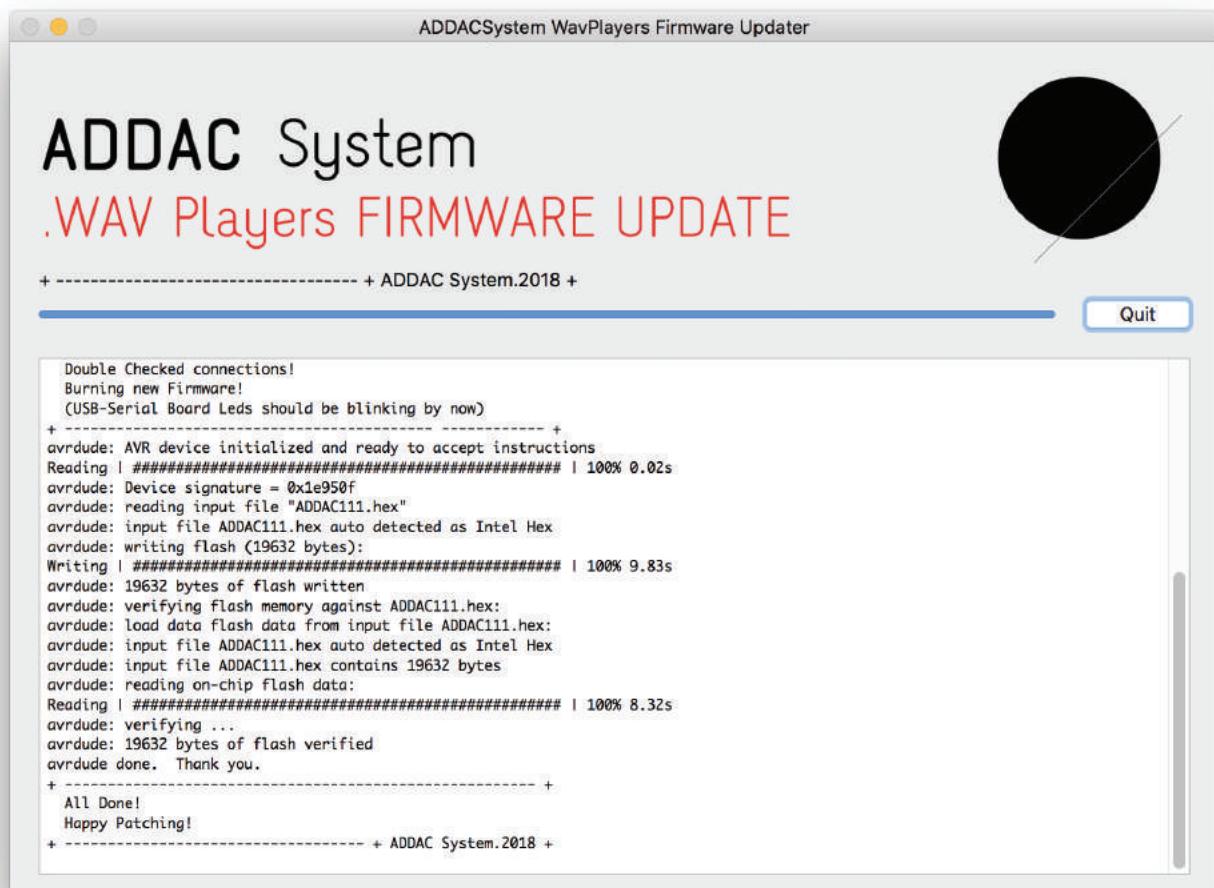


8. If you choose to upgrade your ADDAC101 .WAV Player then you'll be asked to hold down the module's Reset button and release it right after hitting the OK button on the App.  
*The timing of releasing the reset button is crucial for the process to complete.*





10. The upload process will take about 60 seconds to complete. While uploading two leds in the USB to Serial adapter board should be blinking.  
Once the process is complete the console should state: "All Done! Happy Patching!"



### DEBUG:

Check your console against the image above, if they don't match or an error is reported make shure your connections between the Module and USB - Serial Adapter are correct.  
If it keeps failing, you can test diferent timings on releasing the module's Reset button, delaying the release for 1 or 2 seconds.

Contact us if the Upload keeps failing after a few tries.

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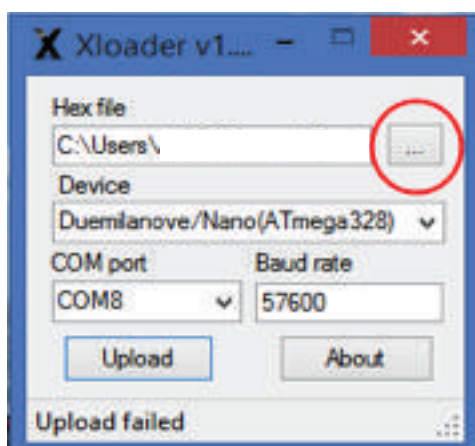
### Upgrading Firmware on Windows

#### Software Requirements

- Lastest Firmware File [http://media.addacsystem.com/firmwares/WAV\\_FIRMWARES\\_HEX.zip](http://media.addacsystem.com/firmwares/WAV_FIRMWARES_HEX.zip)
- Download Serial to USB Adapter Driver: <http://www.ftdichip.com/Drivers/VCP.htm>
- XLoader Software <http://russemotto.com/xloader/XLoader.zip>

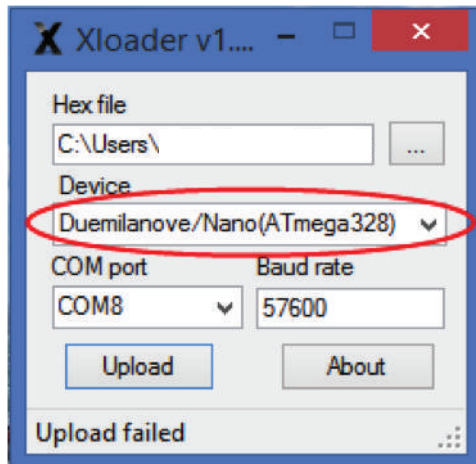
#### Firmware upgrade process:

1. Download and Install the correct Serial to USB Driver according to your Operating System.
2. Download and Extract XLoader.zip
3. Open Extracted Folder
4. Double Click on file avrdude (this will run a configuration file)
5. Open XLoader App
6. Unzip WAV\_FIRMWARES\_HEX.zip, 2 .hex files will appear.
7. Click on "..." button to choose .hex file according to your Module (ADDAC101 or ADDAC111)

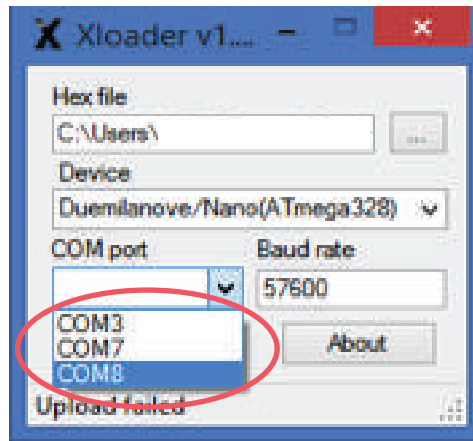
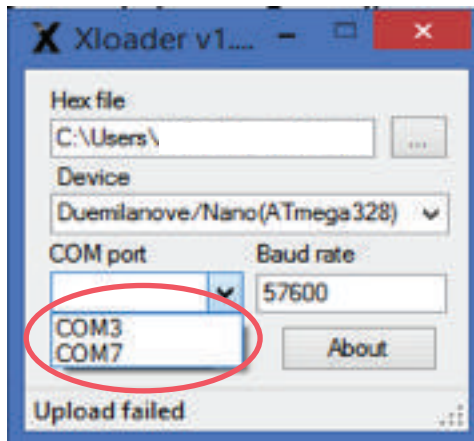




8. Click on Device Box and choose Duemilanove/Nano(ATmega328)



9. Take note of your available COM Ports, Plug in the USB Cable for the USB-Serial adapter and select the new COM port available



10. Now we'll upload the new firmware, apply some steady pressure on the jumper wires connecting to the Module.

10.A. ADDAC101:

Hold the Module's Reset button down and release it once you click the Xloader Upload button. The timing of releasing the Reset button is crucial for the process to complete.

10.B. ADDAC111

Simply click the Upload button.

11. The upload process will take about 60 seconds to complete. While uploading two LEDs in the USB to Serial adapter board should be blinking.

Once the process is complete the console on the bottom should state: "Upload Successful."

DEBUG:

If this does not happen make sure your connections between the Module and USB - Serial Adapter are correct. If it keeps failing, you can test different timings on releasing the module's Reset button, delaying the release for 1 or 2 seconds.

Contact us if the Upload keeps failing after a few tries.

For feedback, comments or problems please contact us at:  
[addac@addacsystem.com](mailto:addac@addacsystem.com)

**Firmware changes log:**

.On OSX no need to eject the card through a special App.

- Files still need to be named as before.

.Small correction regarding synchronization when triggering a file.

.ADDAC111 now supports up to 72 files.

The First batch of ADDAC101s were made back in 2010, since then there has been several pcb revisions. **If your pcb does not match the image below**, please send us photos of your back pcb and we'll let you know!

