

How to change Aux model FAN connection on Elegoo Neptune 4 Max dans Plus to be able to drive it independently.

Disclaimer: this manipulation is made at your own risk.

I only give you my personal experience and what worked for me, but you need to open the 3D Printer to change the cable mapping, so think to unplug power cord before and only do it if you are sure to be able to do it.

Why i wanted to do this change?

Elegoo had choose to use the same PWM connector from the mother board for in head model FAN and Aux model FAN and put a ON/OFF switch on the aux model FAN.

The issue is, the aux fan work as the in-head model fan with the same speed.

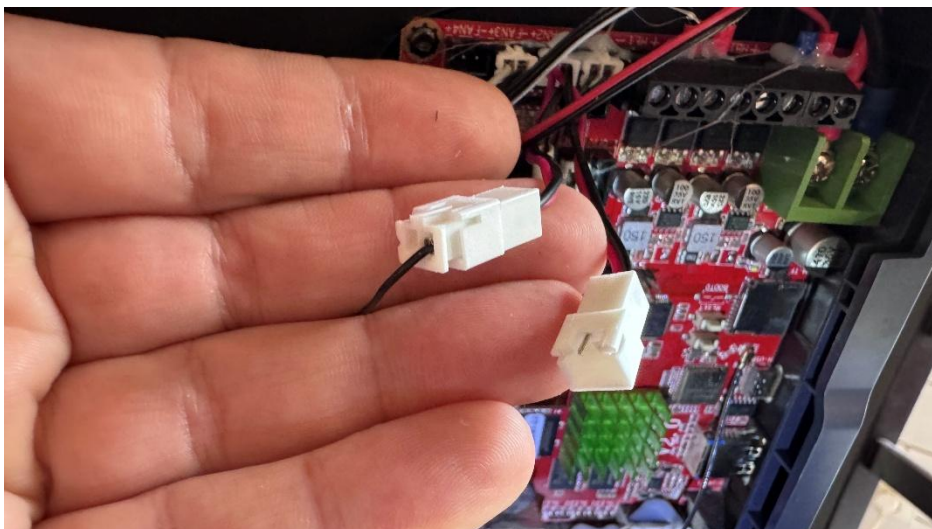
Or the only way is to put aux fan in off.

This is not a good deal because sometimes we need to add a moderate cooling but not a max speed.

On some print, for example, it pushes the model to detach from the tray 😞

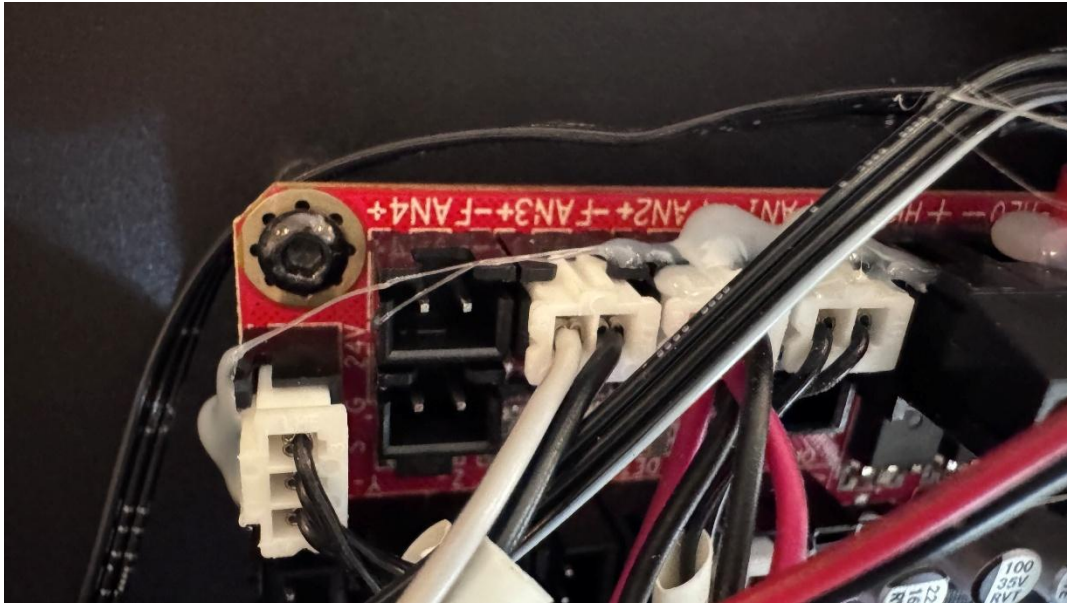
So, to make this change the first thing is to modify the FAN mapping on the motherboard.

By default, the 2 fan are connected to the same position (FAN2) with a Y cable :



As you can see, the in head model fan have only neutral cable, the positive is given in the head.

So we need to move the other connector, with both positive and negative cable from the Y connector and put it to the FAN3 port.



And that's it, I've put some hot glue on connector as Elegoo done everywhere to secure connections.

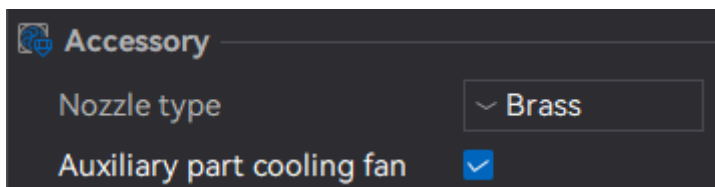
After that, we need to modify the printer.cfg (you have all the code and information in the pinter.cfg file).

In summary, you need 2 things:

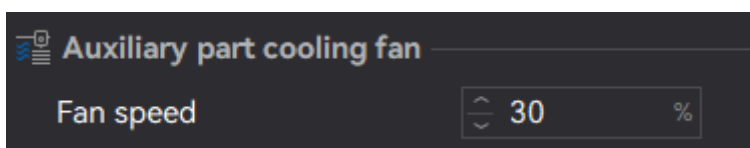
- Activate the aux fan with the good port mapping
- Replace the original M106 G-Code Macro to support the command sent by the Orca Slicer (I think it's the same for other slicer, but I've not tested it): M106 P2 Sxxx

After that you could:

Activate the Aux fan in the Orca's printer settings:



Activate or not the Aux fan and choose the speed in the filament settings (cooling tab) :



The Aux part Fan will start with the primary model fan, in my case after 1 or 2 layers, depending on the model.
And each work at the speed you wanted.

Enjoy

<https://github.com/SebNania/3DPrinter/tree/main/Neptune%204%20Max>