



## Geeetech A10T: 40mm Noctua Mainboard Fan

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### Summary

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I really like my Geeetech A10T as it fits perfectly in a LACK enclosure for temperature stable printing, but...

yes, a 320 bucks 3-color printer does for sure have some flaws but a self-loosing Z axis and the tremendously loud 60mm mainboard fan are surely something that needs to be fixed.

Let's start with the fan:

Checking the height of the original jet turbine mounted (15mm), fitting a 60mm Noctua does not work unless you're starting a complete housing redesign, since the fan has to be mounted "somehow in between" to avoid blocking the leveling screws of the heated bed (controlled by **adddedicated** MOSFET which most likely killed the budget for a proper fan...) and keeping the possibility to safely screw the lid to the lower part.

A search for a quiet fan in the parts box revealed the 40mm Noctua which was planned to be attached to the U30pro (was replaced by a 60mm one) but never did the job.

### **What you need:**

1. Use 4x M3x15 screws to fix the Noctua to the printed adapter - the holes should fit with some slight pressure (threads available).
2. Knowing the Noctua is running on 12V only, apply a buck converter (24V => 12V) in the small cut-out next to the fan and cut & solder the wires directly to the fan.
3. crimp 2 wires to a 2pin JST PH2 connector to connect to the motherboard (you'll find the right assignment for +/- printed on the board)

### **Print Settings**

#### **Printer:**

Alfawise U30

#### **Rafts:**

Doesn't Matter

#### **Supports:**

No

#### **Resolution:**

0,2mm layer height

#### **Infill:**

20%

#### **Filament:**

Nothing special... ABS

black

#### **Notes:**

used ABS since it was already in the printer, but any material will work

Post-Printing =====

### **Disassembly of the original 60mm fan**

if not done yet, remove any filament and unplug the printer - you need to tilt it to the left side... use a 2.5mm allen key to remove the 2 M3 screws underneath the housing. it's a sliding fixation, so you just need to release them for approx. 1~2mm so the housing can slide freely.

Remove the 2 M4 screws at the very left front of the profile - they're fixing the electronics housing bracket (same principle as fixing the display mount).

Unplug the display cable to avoid any damage.

Rattle the entire electronics box until loose and move towards the front so the entire unit can be tilted to get to the 4 M3 screws fixing the main lid. Remove them and carefully lift the lid - the fan is connected right to the front on the right-most 2 pin connector.

Unplug (remember the position of the connector) the fan and remove the cover

Tilt the lid by 180° to get to the 4 M3 screws underneath and remove them - remove the fan and you're done with step #1

### **Set the correct voltage**

The Noctua is running on 12V (mainboard features 24V) so the buck converter needs to be adjusted prior to being assembled / soldered to the wires. Checkout the videos on YouTube to get it running properly

### **Adding the Noctua fan and buck**

Place the Noctua fan in the adapter and use the M3x15 screws to fix it to the adapter. If not already done, place the buck converter in the pocket and solder the wires as marked on the adapter.

Slide the adapter over the pillars and press it down to the lid (see pictures). Use the original screws to tighten up everything.

Attach the JST connector to the exact same position where you've removed the original fan and re-assemble everything in the opposite way.

And you're **done!**

### **Direction of the Noctua**

The direction of the fan is marked on the sides of the Noctua, have a look in which direction you're going to mount it. In case you've done it as shown on the pictures, the Noctua should **blow-out** the air out of the housing (instead of blowing in as the original fan).

Have not done much testing yet, but the first short prints did not show any issues by now...

Category: 3D Printer Parts

## Model files



**mainboard\_fan\_adapter.stl**

[Find source .stl files on Thingiverse.com](#)

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