

! LGA1700, LGA1200 & LGA115x

Dear customer,

Thank you very much for choosing the Noctua NH-U12A.

First introduced in 2005, our NH-U12 series has won more than 600 awards and recommendations from leading international hardware websites and magazines.

The NH-U12A is the latest addition to this prestigious series and I'm confident that you will be able to sense some of the research, attention and care we've put into making this product.

Enjoy your Noctua NH-U12A!

Yours sincerely,



Roland Mossig, Noctua CEO

This manual will guide you through the installation process of the SecuFirm2™ mounting system step by step.

Prior to installing the cooler, please consult the compatibility centre on our website (ncc.noctua.at) and verify that the cooler is fully compatible with your motherboard.

Please also make sure that your PC case offers sufficient clearance for the cooler and that there are no compatibility issues with any other components (e.g. tall RAM modules).

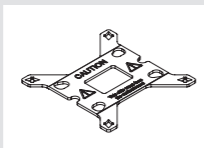
Double check that the heatsink and fan clips do not make contact with the VGA card, other PCIe cards, motherboard heatsinks or any other components.

Noctua cannot be held responsible for any damage or losses caused by compatibility issues.

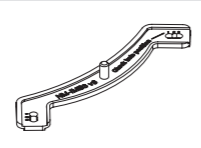
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Required mounting parts:



1x NM-IBP4
backplate



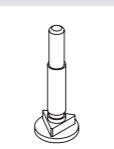
2x NM-IMB3
mounting bars



4x NM-ICS1
clip-on spacers



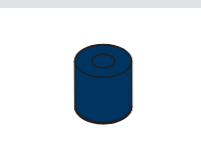
4x NM-ITS1
thumb screws



4x NM-IBT5
bolts



4x NM-IPS1
black plastic spacers for
LGA1200/115x



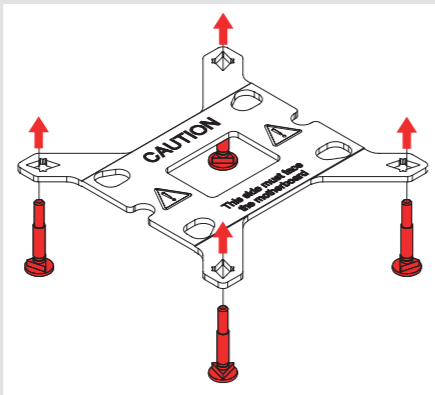
4x NM-IPS3
blue plastic spacers for
LGA1700

1 Removing the motherboard

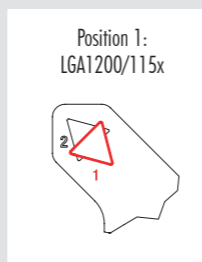
If you would like to use the cooler on an assembled system and your case does not have a cut-out at the rear side of the motherboard tray, you must first remove the motherboard from the case in order to be able to install the supplied backplate.

2 Setting up the backplate

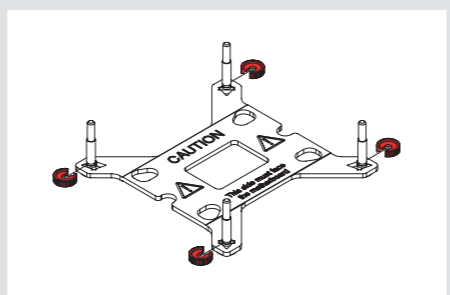
First, identify the side of the backplate that should face the motherboard (marked with caution signs). Then choose the appropriate hole spacing for your socket and insert the four bolts into the backplate from the opposite side (marked with model name, SecuFirm2™ branding and numbers for hole spacing) at the appropriate position.



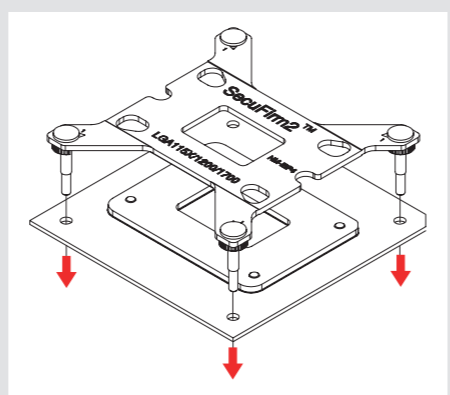
Use hole position 1 for LGA1200/115x (LGA1150, LGA1151, LGA1155, LGA1156) and hole position 2 for LGA1700 (LGA17xx family):



Fix the bolts using the NM-ICS1 clip-on spacers. Note that 2 extra clip-on spacers are supplied in case any are lost or damaged when removing the bolts at a later point.



3 Attaching the backplate



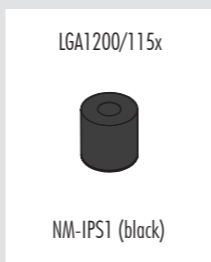
Caution: The supplied backplate will install over the motherboard's stock backplate, so the motherboard's stock backplate must not be taken off.

Place the backplate on the rear side of the motherboard so that the bolts protrude through the mounting holes.

4 Installing the mounting bars

Please first choose the correct set of plastic spacers and the correct set of holes on the mounting bars according to whether you are using an LGA1200/LGA115x (LGA1150, LGA1151, LGA1155, LGA1156) or an LGA1700 (LGA17xx family) socket motherboard.

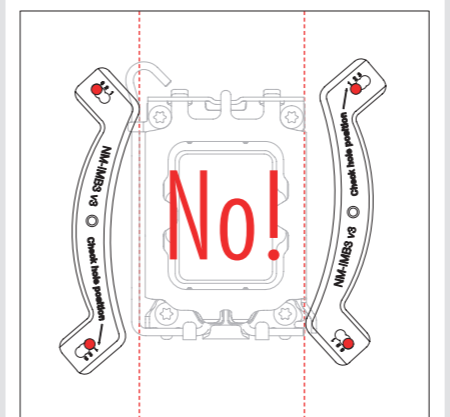
Use the black NM-IPS1 plastic spacers for LGA1200/LGA115x (LGA1150, LGA1151, LGA1155, LGA1156) and the blue NM-IPS3 spacers for LGA1700 (LGA17xx family).



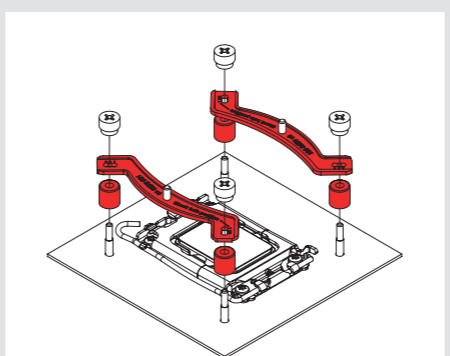
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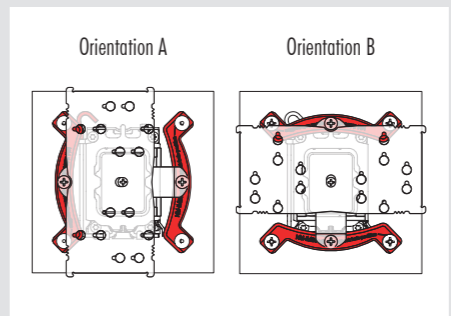
Caution: Make sure to use the correct hole position on both ends of the NM-IMB3 mounting bars so that they will not be misaligned.



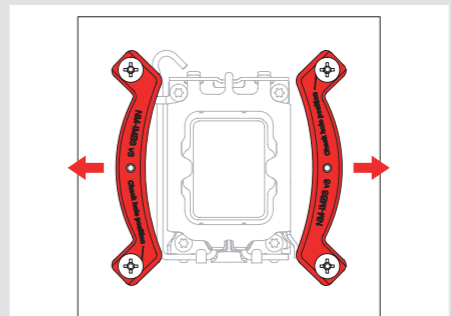
Put the plastic spacers onto the bolts of the backplate, then add the mounting bars.



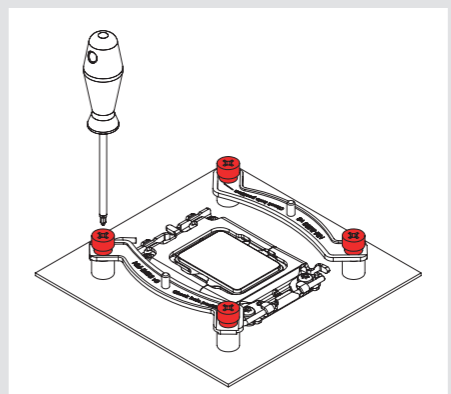
Caution: Choose the alignment of the mounting bars according to the desired final orientation of the cooler.



Caution: Make sure that the curved sides of the mounting bars are pointing outwards.



Fix the mounting bars using the four NM-ITS1 thumb screws.

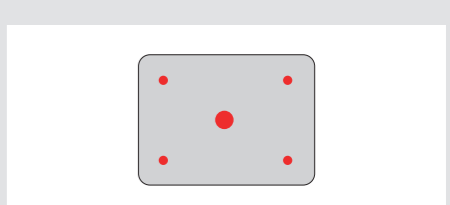


Caution: Gently tighten the screws until they stop, but do not use excessive force (max. torque 0.6 Nm).

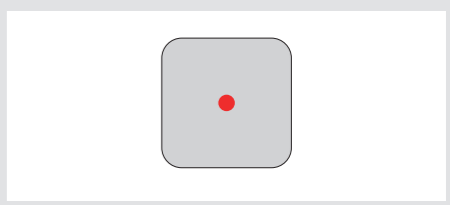
5 Applying the thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Then apply the supplied NT-H1 thermal paste onto the CPU as shown in the following images.

For LGA1700 (LGA17xx family), apply 5 small dots; 4 dots with ~2mm diameter near the corners plus 1 dot with 3-4mm diameter in the centre:



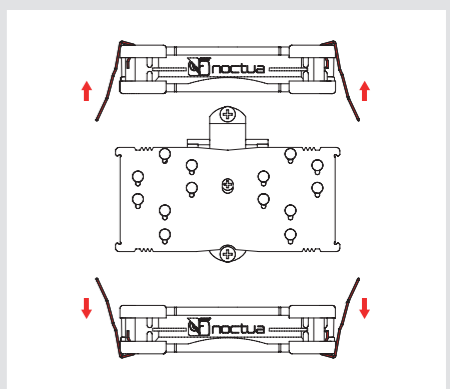
For LGA1200/115x (LGA1150, LGA1151, LGA1155, LGA1156) apply a single 4-5mm dot in the centre:



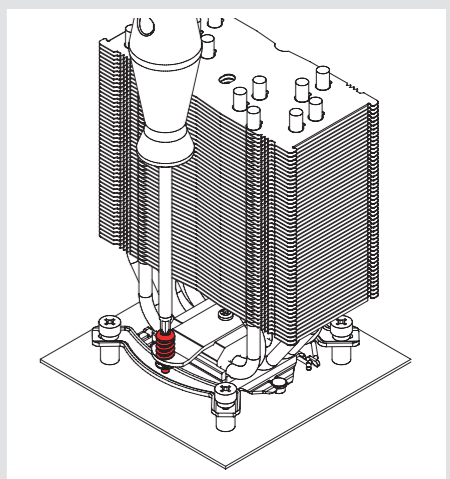
Caution: Applying too much thermal paste will lower heat conductivity and cooling performance!

6 Fastening the heatsink to the CPU

Caution: Please first take off the fans as well as the protection cover at the bottom side of the heatsink.



Then put the heatsink onto the CPU and screw it to the screw threads of the mounting bars. Perform 2-3 turns on each screw, then repeat until both are fully tightened.

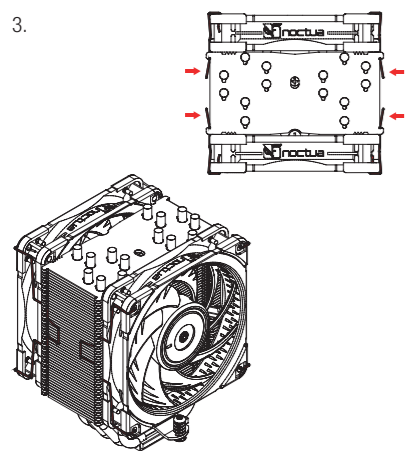
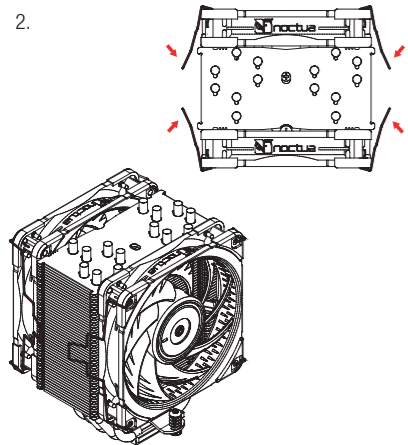
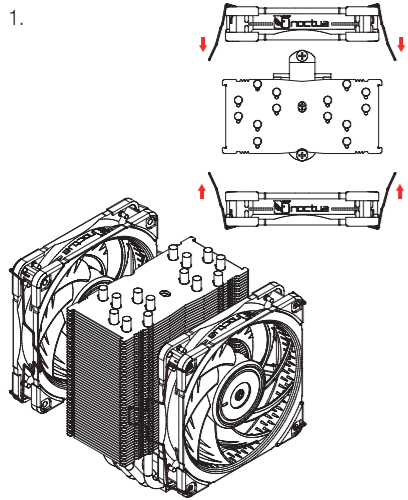


Caution: Gently tighten the screws until they stop, but do not use excessive force (max. torque 0.6 Nm).



7 Fan setup

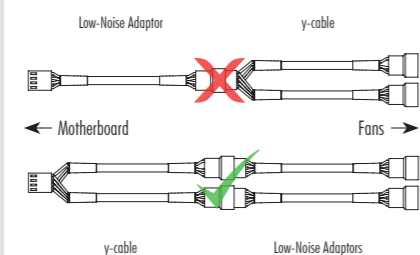
Reattach both fans using the supplied steel clips for maximum cooling performance. Alternatively, you can leave the rear fan off and use it as a case fan instead.



Connect the fan(s) to the motherboard's CPU fan header(s). If necessary, use the supplied NA-YC1 y-cable to connect both fans to one fan header.

Depending on your CPU and the temperature inside the case, you may interconnect the supplied NA-RC14 Low-Noise Adaptors (L.N.A.) in order to further reduce the fans' operating noise. Connect the fan to the motherboard's CPU fan header.

Caution: Never use one adaptor for both fans by putting it before the y-cable.



Caution: When using the L.N.A.s, check the temperature of your CPU using appropriate software (e.g. the respective applications of your motherboard manufacturer), in order to evade automatic throttling of the CPU due to the increased temperature. If the cooling performance is insufficient, please increase case ventilation or remove the L.N.A.s.

! Transporting your system

As it is not possible to reliably calculate or control the forces that act upon a system during transport (e.g. in shipping), we generally recommend, for safety reasons, taking the cooler off. Noctua cannot be held responsible for any damage that may arise due to excessive stress during transport if you keep the heatsink installed.

! Warranty, support and FAQs

Even with high-grade products and strict quality control, the possibility of defects cannot be eliminated entirely. Therefore, we aim at providing the highest possible level of reliability and convenience by offering a warranty period of 6 years and direct, fast and straightforward RMA service.

Should you encounter any problems with your NH-U12A, please don't hesitate to contact our support team (support@noctua.at).

Please also consult the FAQ section on our website: www.noctua.at/faqs

! LGA20xx

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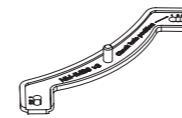
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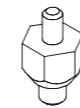
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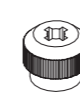
Required mounting parts:



2x NM-IMB3
mounting bars



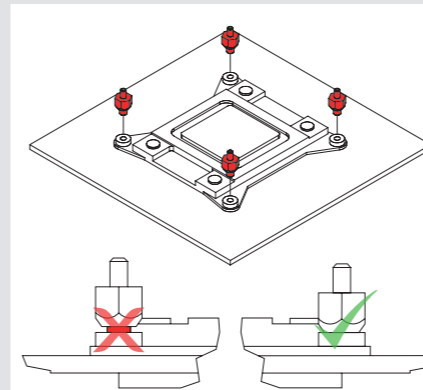
4x NM-IBT2
bolts



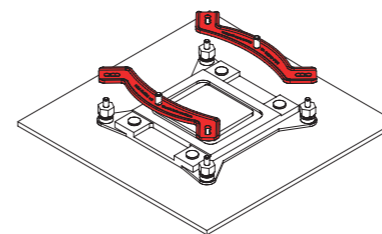
4x NM-ITS1
thumb screws

1 Installing the mounting bars

First screw the NM-IBT2 bolts into the screw threads of the LGA20xx socket frame.

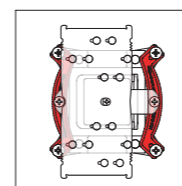


Then put the NM-IMB3 mounting bars onto the bolts.

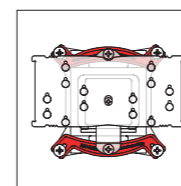


Caution: Choose the alignment of the mounting bars according to the desired final orientation of the cooler.

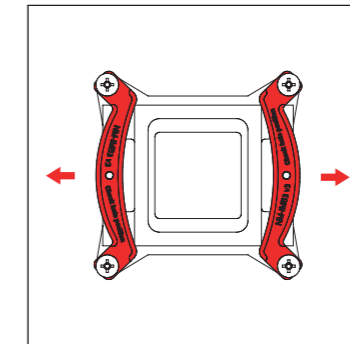
Orientation A



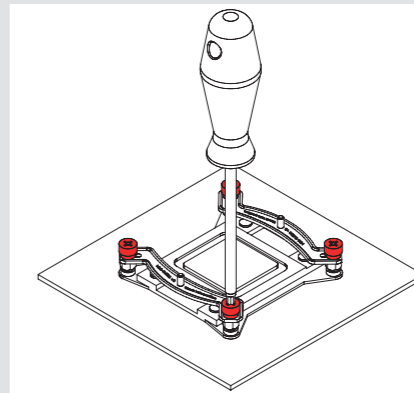
Orientation B



Caution: Make sure that the curved sides of the mounting bars are pointing outwards.



Fix the mounting bars using the four NM-ITS1 thumb screws.

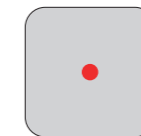


Caution: Gently tighten the screws until they stop, but do not use excessive force (max. torque 0.6 Nm).

2 Applying the thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first.

Then press a small drop with 4-5mm diameter of NT-H1 thermal paste onto the centre of the heatspreader.



Caution: Applying too much thermal paste will lower heat conductivity and cooling performance!

3 Fastening the heatsink to the CPU

Please refer to step 6 of the LGA1700, LGA1200 & LGA115x installation manual.

4 Fan Setup

Please refer to step 7 of the LGA1700, LGA1200 & LGA115x installation manual.

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! AMD (AM4 & AM5)

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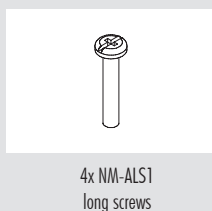
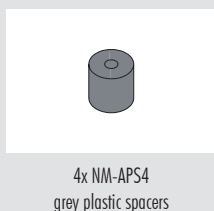
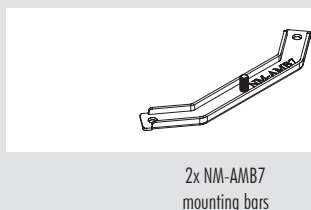
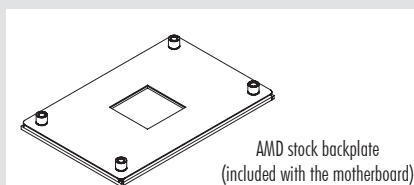

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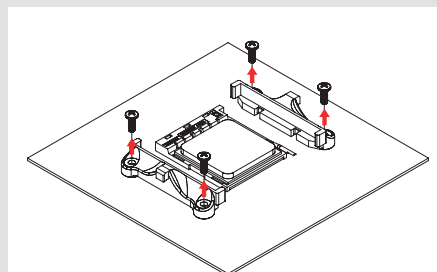
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Required mounting parts:

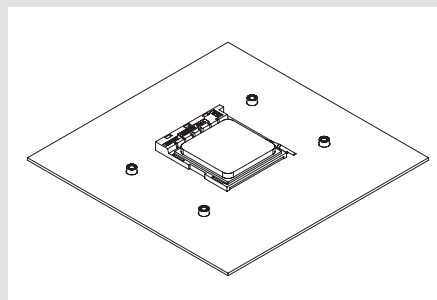


1 Removing the stock retention module — putting the backplate in place

If your motherboard comes with a pre-installed CPU cooler retention module, please first remove it by unscrewing it from the backplate. The SecuFirm2™ mounting system will install directly to the stock backplate, so please keep it in place.

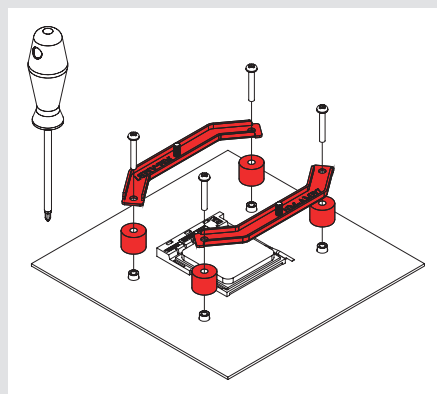


If your motherboard does not come with a pre-installed CPU cooler retention module, the AMD stock backplate should be included with the motherboard accessories. Please put the backplate on the rear side of the motherboard so that the screw threads of the backplate stick through the mounting holes of the motherboard as shown below. If your motherboard does not include a stock backplate, please contact our Noctua service team at support@noctua.at.



2 Attaching the mounting bars

First put the plastic spacers onto the screw threads of the backplate, then fix the NM-AMB7 mounting bars using the four NM-ALS1 long screws.

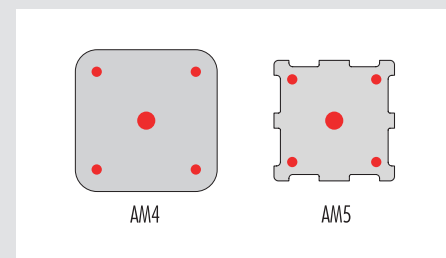


Make sure that the curved sides of the mounting bars are pointing outwards.

3 Applying the thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first.

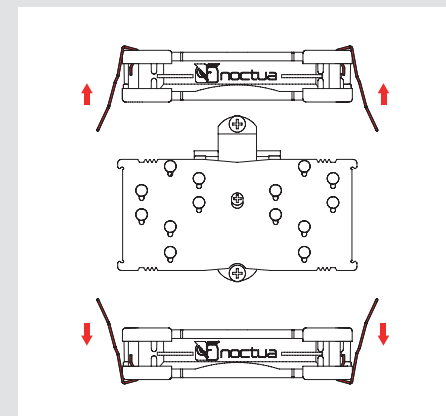
Apply 5 small dots; 4 small dots with ~2mm diameter near the corners plus 1 dot with 3-4mm diameter in the centre:



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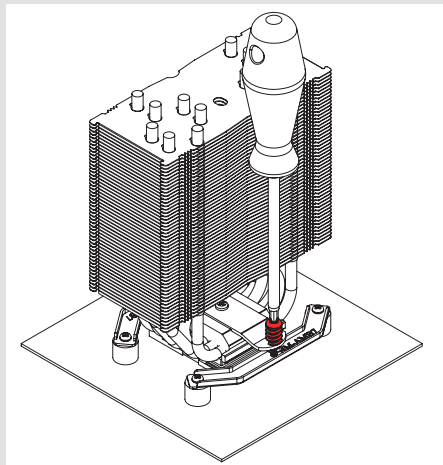
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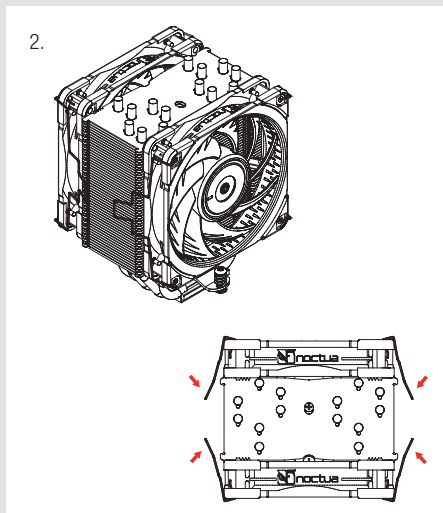
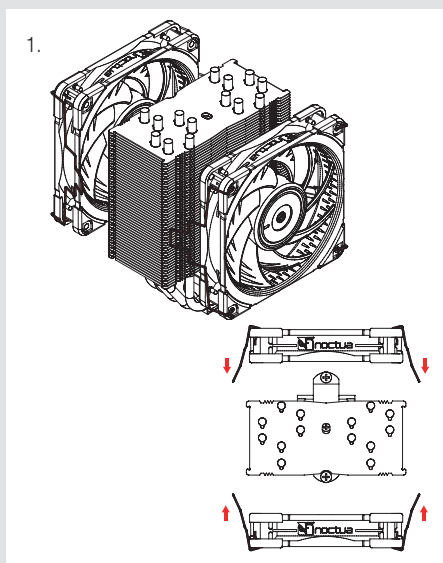
Perform 2-3 turns on each screw, then repeat until both are fully tightened.



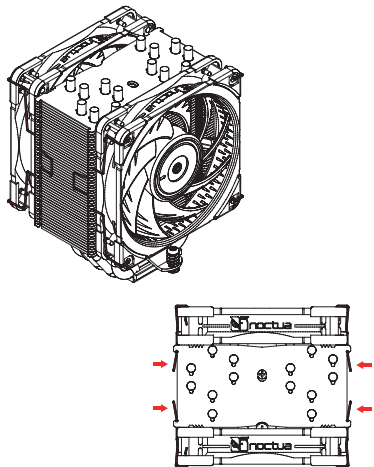
Caution: Gently tighten the screws until they stop, but do not use excessive force (max. torque 0.6 Nm).

5 Fan setup

Reattach both fans using the supplied fan clips for maximum cooling performance. Alternatively, you can leave the rear fan off and use it as a case fan instead.



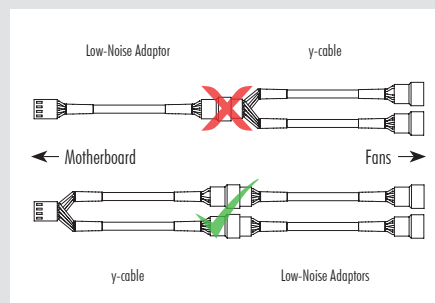
3.



Connect the fan(s) to the motherboard's CPU fan header(s). If necessary, use the supplied NA-YC1 y-cable to connect both fans to one fan header.

Depending on your CPU and the temperature inside the case, you may interconnect the supplied NA-RC14 Low-Noise Adaptors (L.N.A.) in order to further reduce the fans' operating noise. Connect the fan to the motherboard's CPU fan header.

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