The EZ-Case Tutorial



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A short word

I designed this case for my EZ-B, now I made it so that everyone can enjoy my labors.
If you like my case and don't have a 3D-printer, you can order it from:
https://www.shapeways.com/model/1198091/ez-case.html?li=modelEdit

Ordering it via this website will support me a little. Once supported enough I can help myself to an EZ-Mini and make a case for that one as well.

Parts

Required:

To complete this build you will require the following items:

- The top part of the EZ-Case.
- The bottom part of the EZ-Case.
- 4x M3 female to female 16mm standoff.
- 8x M3 Screw 5 mm (hex or cross, your pick, but not countersunk).

Mounting the EZ-Case(optional ways, see step 5):

- 4x M3 self-tapping screws (length depends on where you mount the EZ-B and how).
- Double sided tape.

Optional:

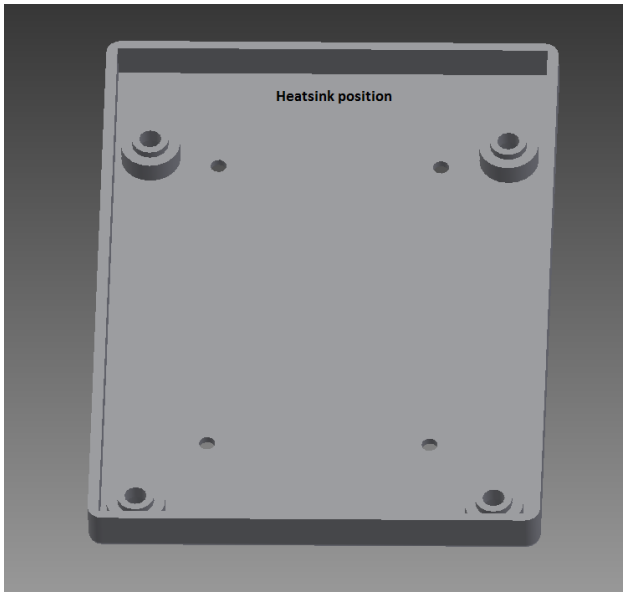
As an option there is the possibility to add a 25mm fan to the top of the case, to do this you will require the following parts:

- 25 x 25mm Fan 5v.
- 4x M3 Screw 15mm.
- 4x M3 nut.

Assembly

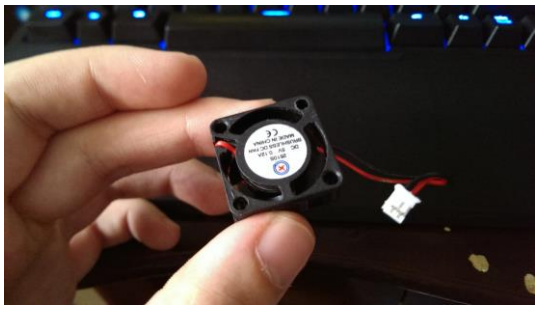
Once all the parts are acquired it is time for assembly. The assembly is very easy and strait forward.

Step 1:
Place the EZ-B in the bottom of the EZ-Case, make sure all the holes align.
The heatsinks on the EZ-B should be on the side shown here on the right.



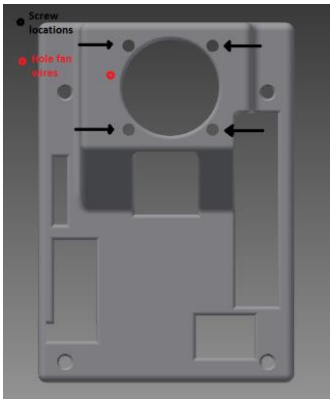
Step 2:
Insert a M3 5mm screw on the bottom of the EZ-Case bottom. Next screw a M3 standoff on to that screw. Remember that the spacers have to be on the inside of the case. Repeat this 3 more times.

Step 3 (optional):
If you are going to use a fan for extra cooling, you will have to drill an extra hole, this depends on the fan. When using the fan from the picture to the right, you should drill at about the position of the red circle. But you should measure it and then drill, just to be sure.



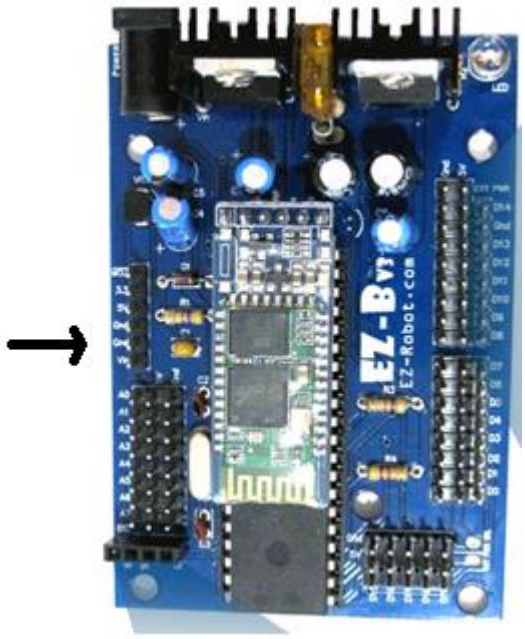
Next remove the connector from the fan, this can be done with a pair of tweezers and some handy work, so you can put it back on later.
Once the connector is removed put the wires thru the hole and put the connector back on.

Position the fan with closed side upward on top of the EZ-Case top part. Use the designated M3 screws (15mm) and nuts to mount the fan to the top of the case.

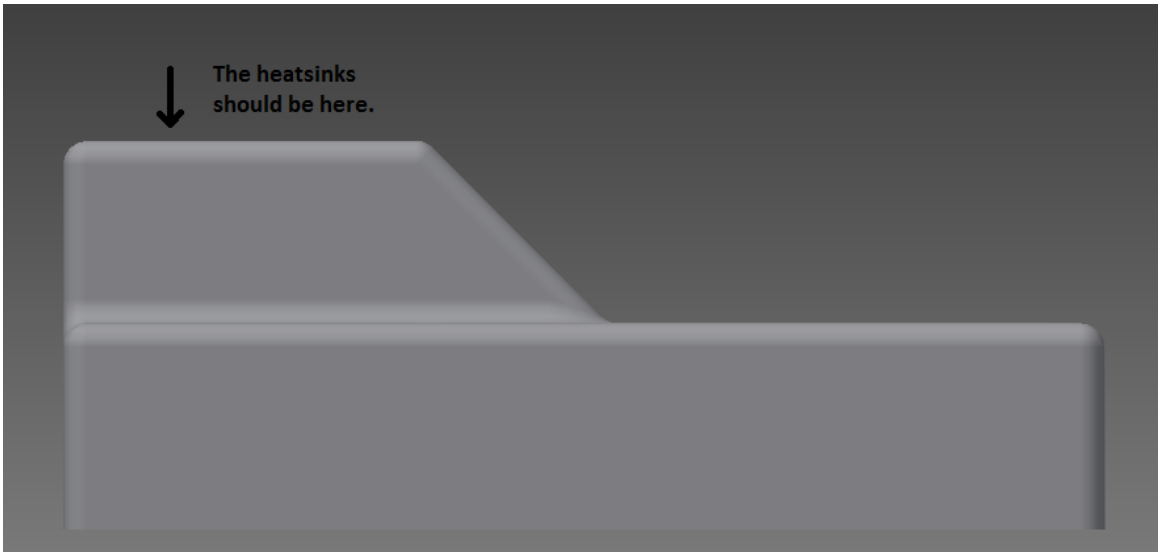


Once the fan is mounted in place and blowing in the right direction, it's time to connect it to the EZ-B. Connect the fan to the 5v and Gnd at the designated position. When connecting the fan like this you won't lose an analog or digital port.

Now position the wire so that it won't get in the way of the components of the EZ-B, then proceed to step 4.



Step 4(final assembly):
In this step we are going to enclose the EZ-Case with its new inhabitant.
Place the top part of the EZ-Case on the bottom part of the EZ-Case. Make sure all the holes align.



Next up, screw in the M3 5mm screws in to the 16mm standoffs. Repeat this 3 more times and the EZ-Case is completely assembled. In case there is a gap between the top and bottom part of the EZ-Case, you might want to shorten the standoffs until the gap disappears. I recommend doing this either with a lathe, sandpaper, saw or a Dremel tool. The distance depends on the gap. If this doesn't solve the problem try loosening the screws. With standoffs that are too short and tight screws, the case will bend.

Step 5(mounting):
Mounting in the EZ-Case can be done in multiple ways, there are four holes in the bottom of the EZ-Case which can be used to mount the case. You could also use double sided tape and just stick it to your robot. How you mount your EZ-Case is up to you.