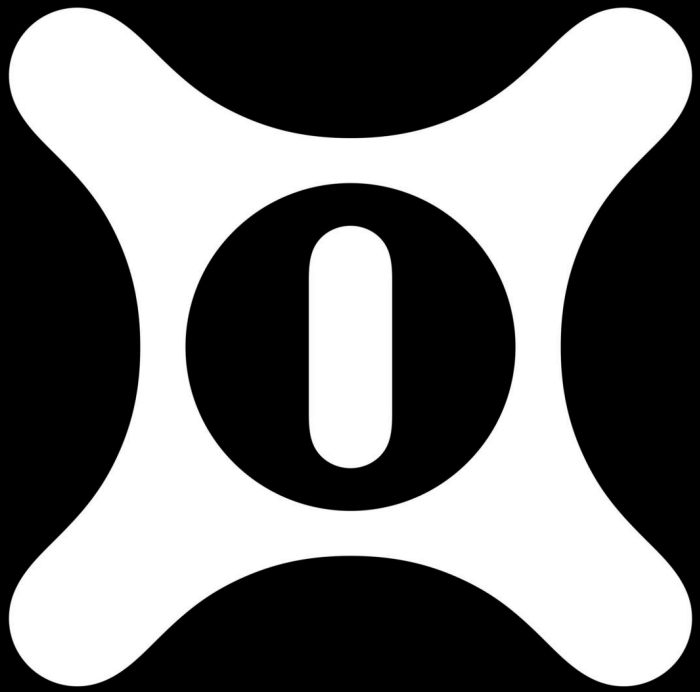


XO1 Build Guide

Build your own 5 inch FPV racing drone. It's super easy.

40 steps



1

Step 1 of 40

Get your gear! You
can build the XO1 with your
most favorite components.



2

Step 2 of 40

If you order the XO1 bundle from our store you will receive the four bodyparts in your favorite color as well as 4 m3 screws (12mm), 4 dampeners, 4 m3 screws and 2 zip ties.



3

Step 3 of 40

We screw all four motors to the XO1 arms. Important at this step is the order. Start with a silver screw motor on the front right arm.



4

Step 4 of 40

After we guide the cables through the arms, it is now time to solder the ESCs. The order of the cables is not yet important, but keep in mind that we may have to change two wires later.



5

Step 5 of 40

Now we can move the ESCs into the arms. Only the cables on the other side should be visible.



6

Step 6 of 40

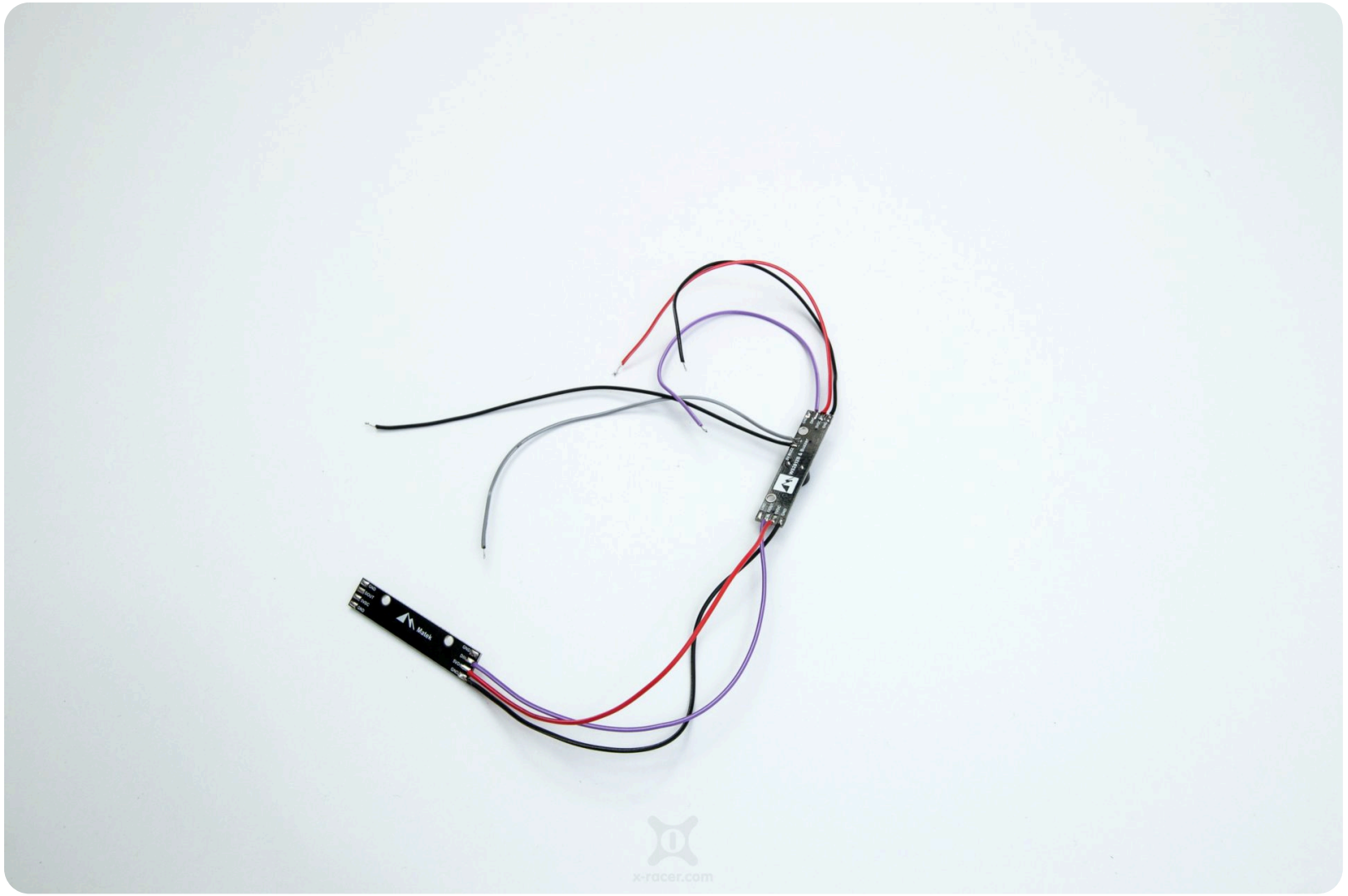
We guide the controller cables from the ESCs to the top.



7

Step 7 of 40

Now it's time to prepare the two LED bars. For that we have to cut some cables to the correct length.



8

Step 8 of 40

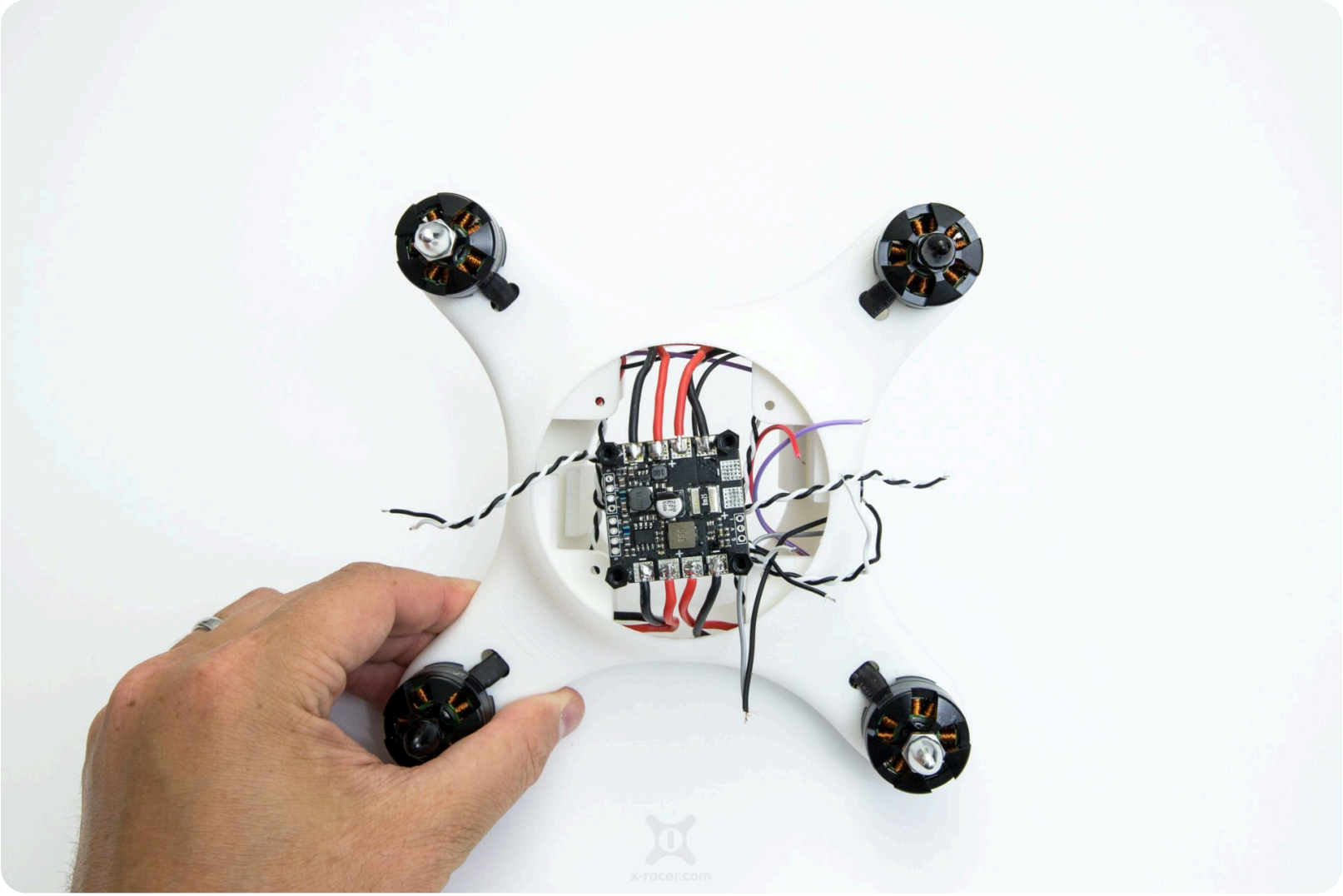
The final assembly is pretty straight forward. We connect all the cables from one end of the front LED to the input solder pads of the back LED module. We do the same with the front module plus two extra cables for the buzzer.



9

Step 9 of 40

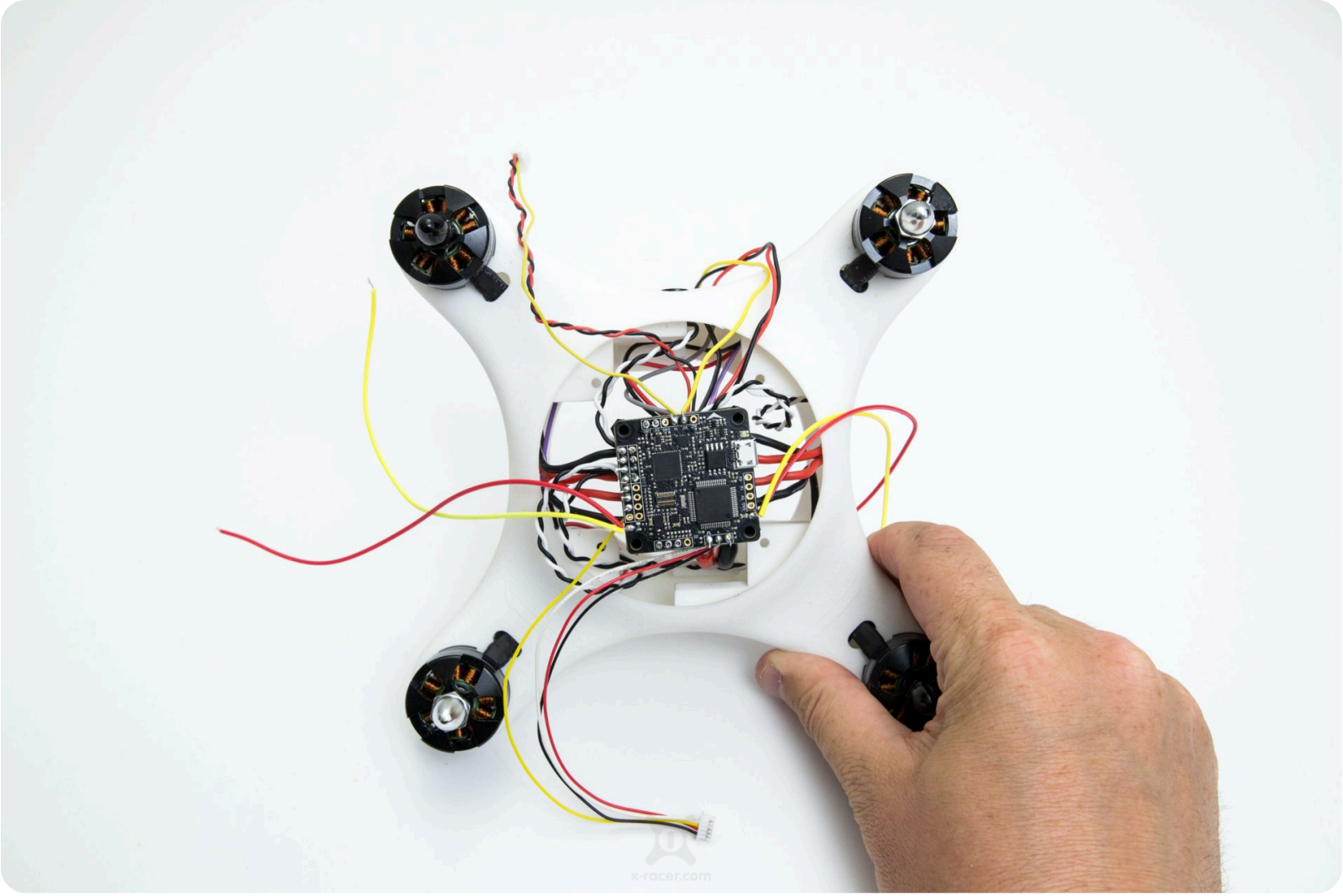
Finally we can put both LED modules in their pocket within the XO1. They will hold on their own but you can extra fix them with double sided tape or a drop of glue.



10

Step 10 of 40

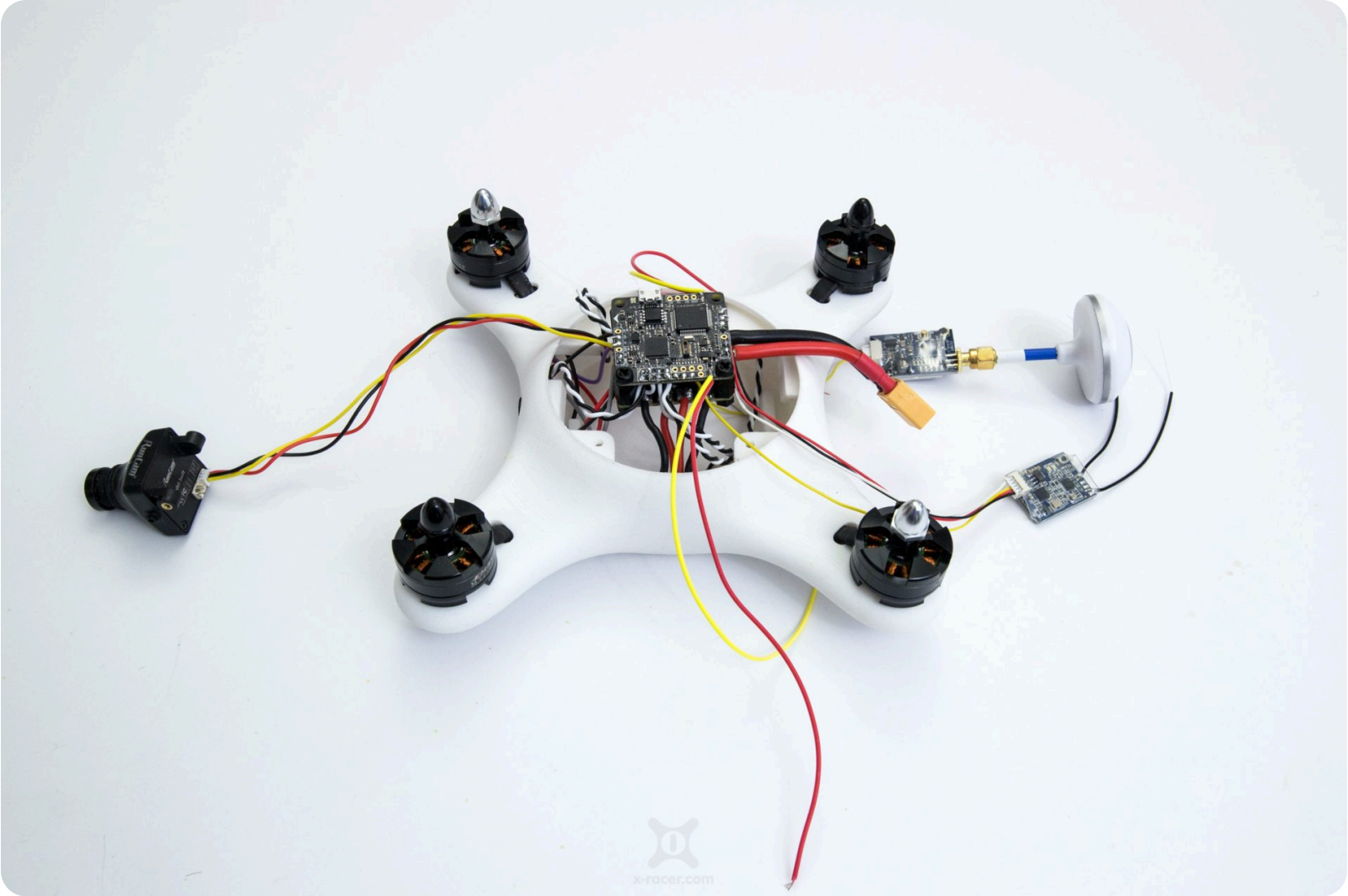
Now it's time to solder the power cables of the ESCs to the power distribution board. The orientation of the PDB is very important so double-check that all cables have the ideal length.



11

Step 11 of 40

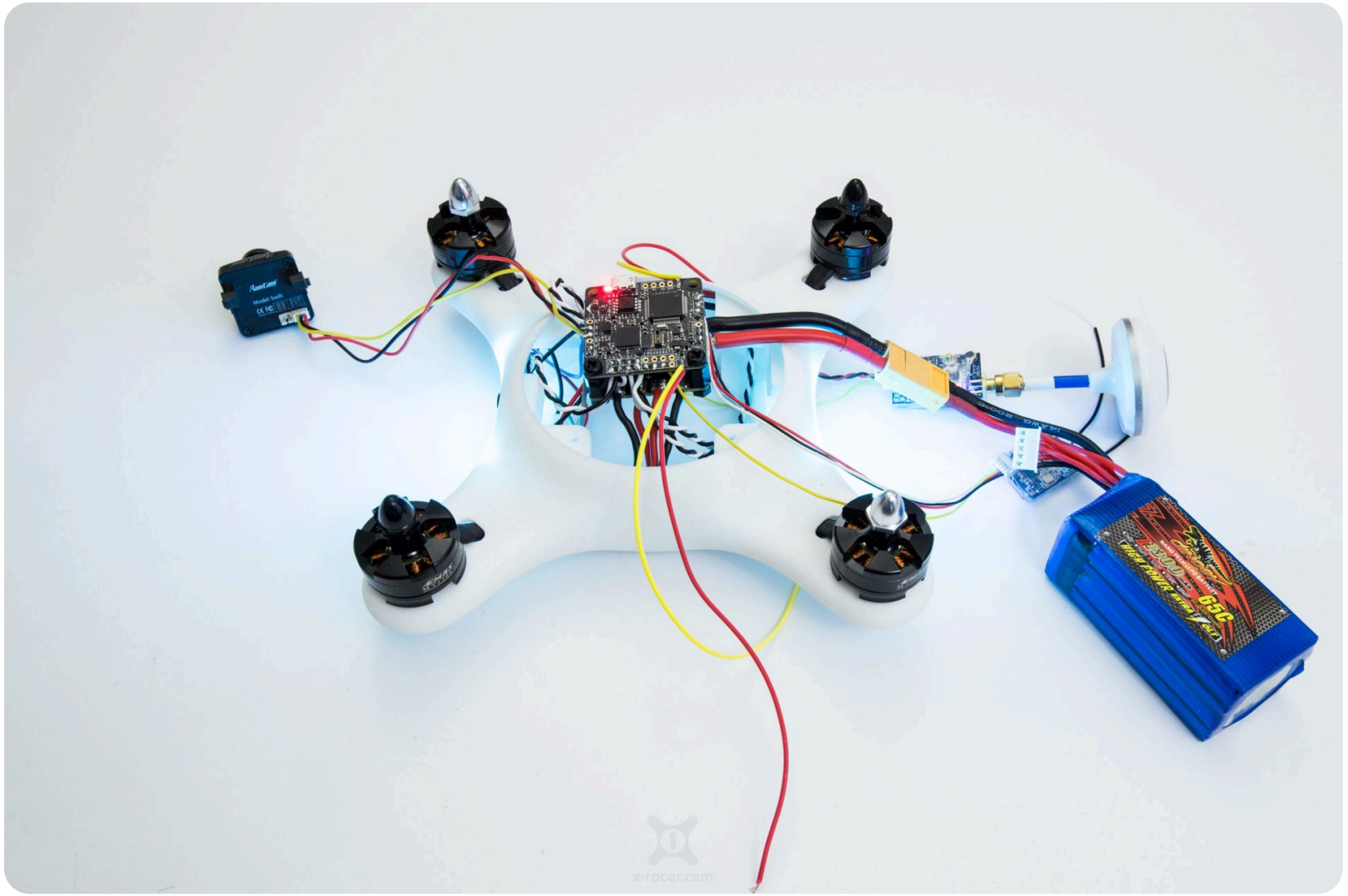
We solder the VX and TX cables to our flight controller. For a detailed description please refer to the documentation of your flight controller. The BrainFPV RE01 has an excellent diagram that makes this step very easy.



12

Step 12 of 40

We solder the XT60 pigtail to the PDB. Then we can connect the cam, TX and VX cables to the components.



13

Step 13 of 40

This is an excellent moment to test our setup with power! Everything should work already at this step. Check that all cables are securely soldered. Also hook up the XO1 to a computer and make the motor spinning test. It may be necessary to switch some of the ESC cables. Also test the video transmission with your FPV goggles.



14

Step 14 of 40

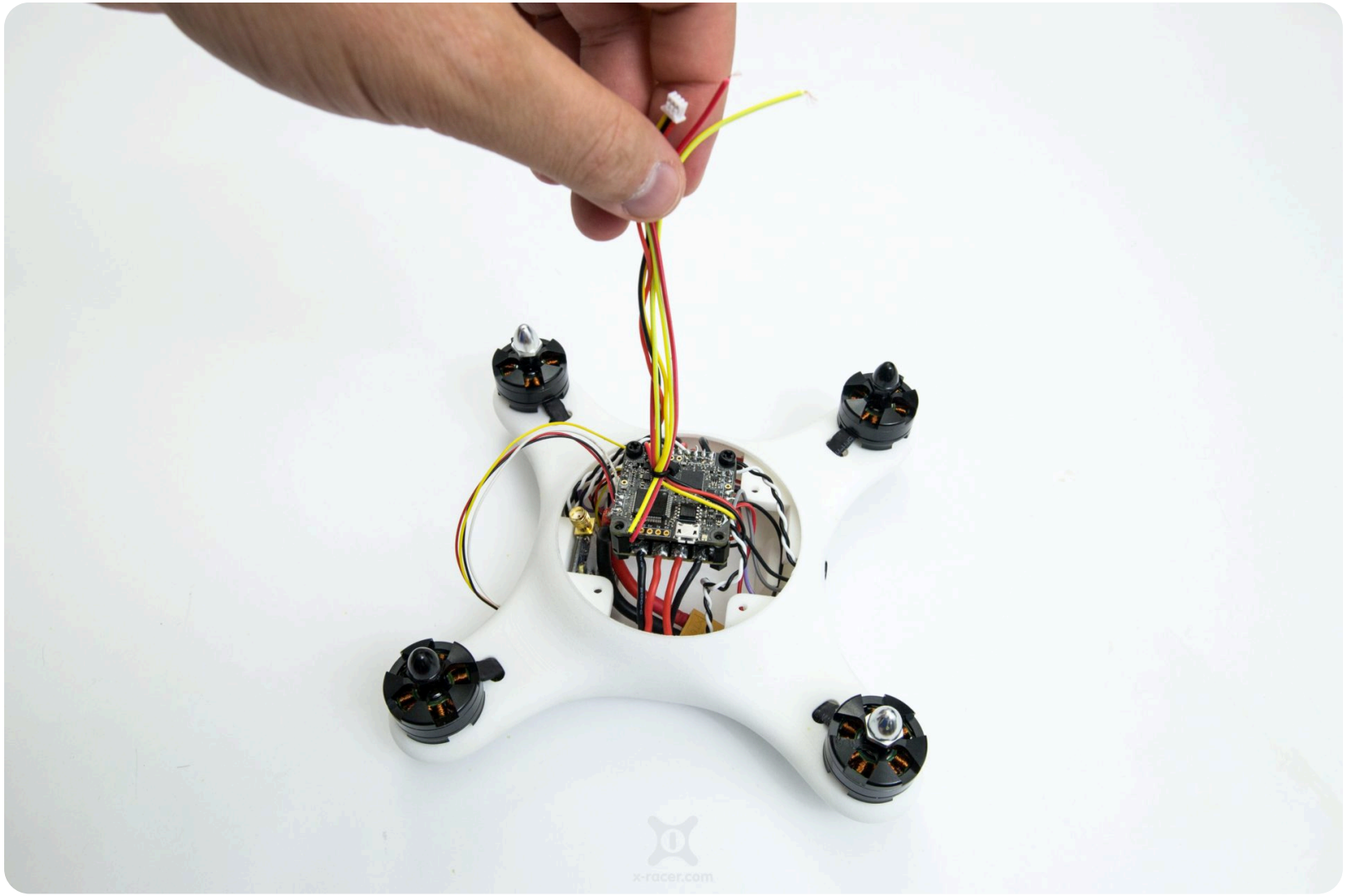
Everything worked on the last step? Perfect! Then we can start to fix the internal components. This is very easy with the XO1, as you can just use one of the zip ties that comes with the bundle to fix the video transmitter.



15

Step 15 of 40

We do the same thing with the RX receiver on the front. The antennas of the XSR can be placed within the body.



16

Step 16 of 40

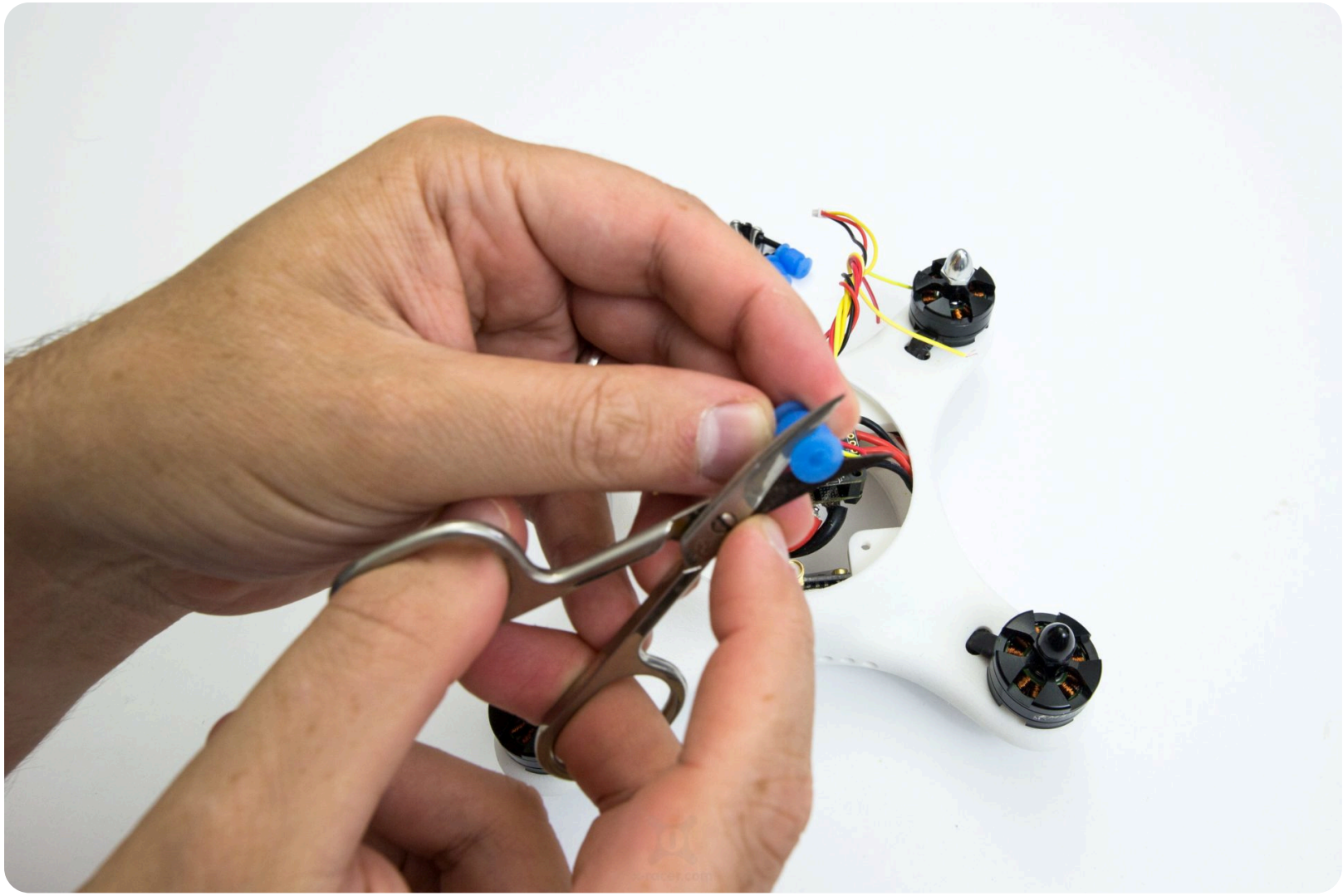
We also zip tie all the cables that are going to the pod. Usually this is just the video transmitter cable, but in my case it is also four extra cables for the IR lap timer.



17

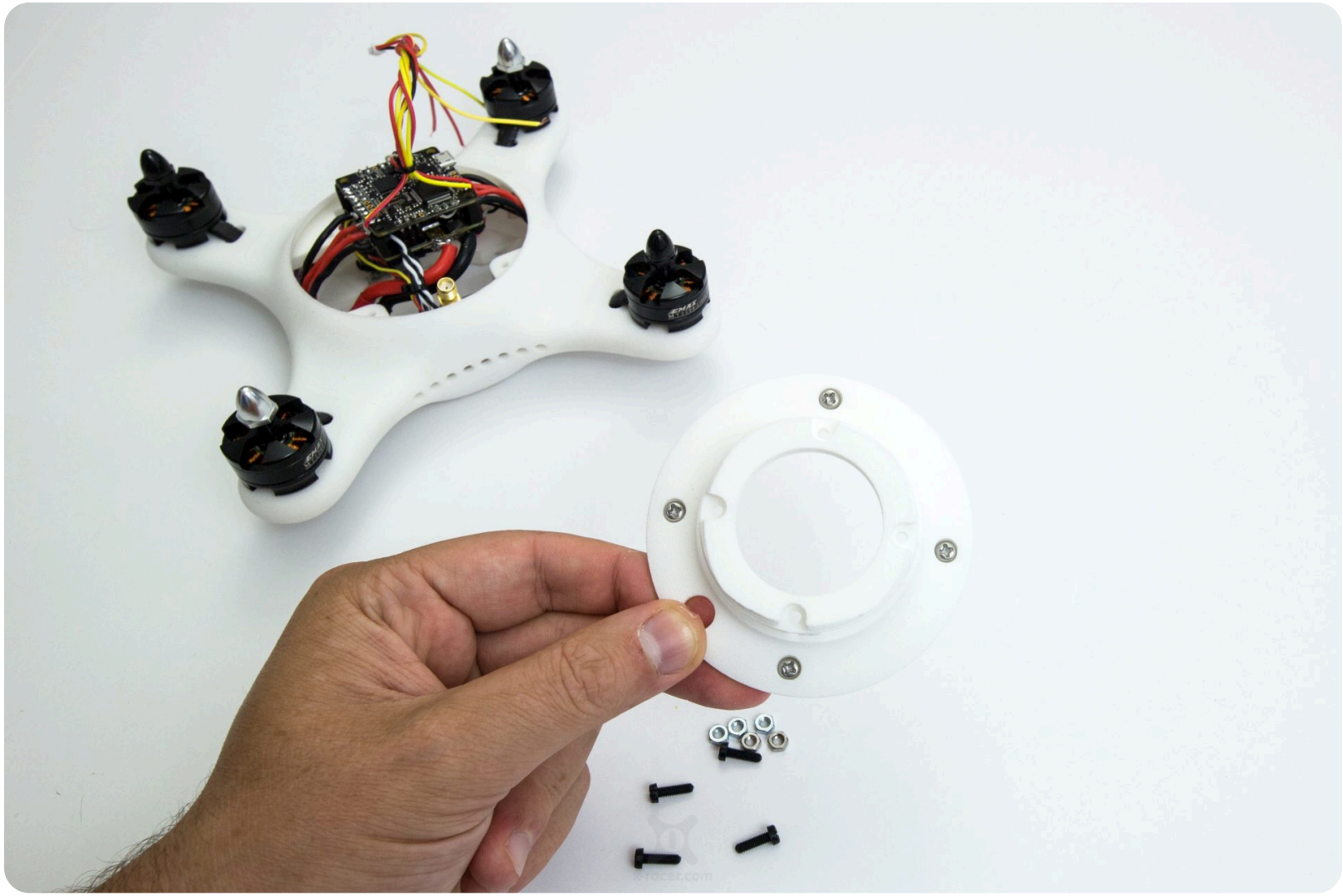
Step 17 of 40

Until now we only had to use zip ties for getting all these components in place. Now it's time to use the rest of the screw bundle and dampener bundle that comes with the XO1.



18

Step 18 of 40



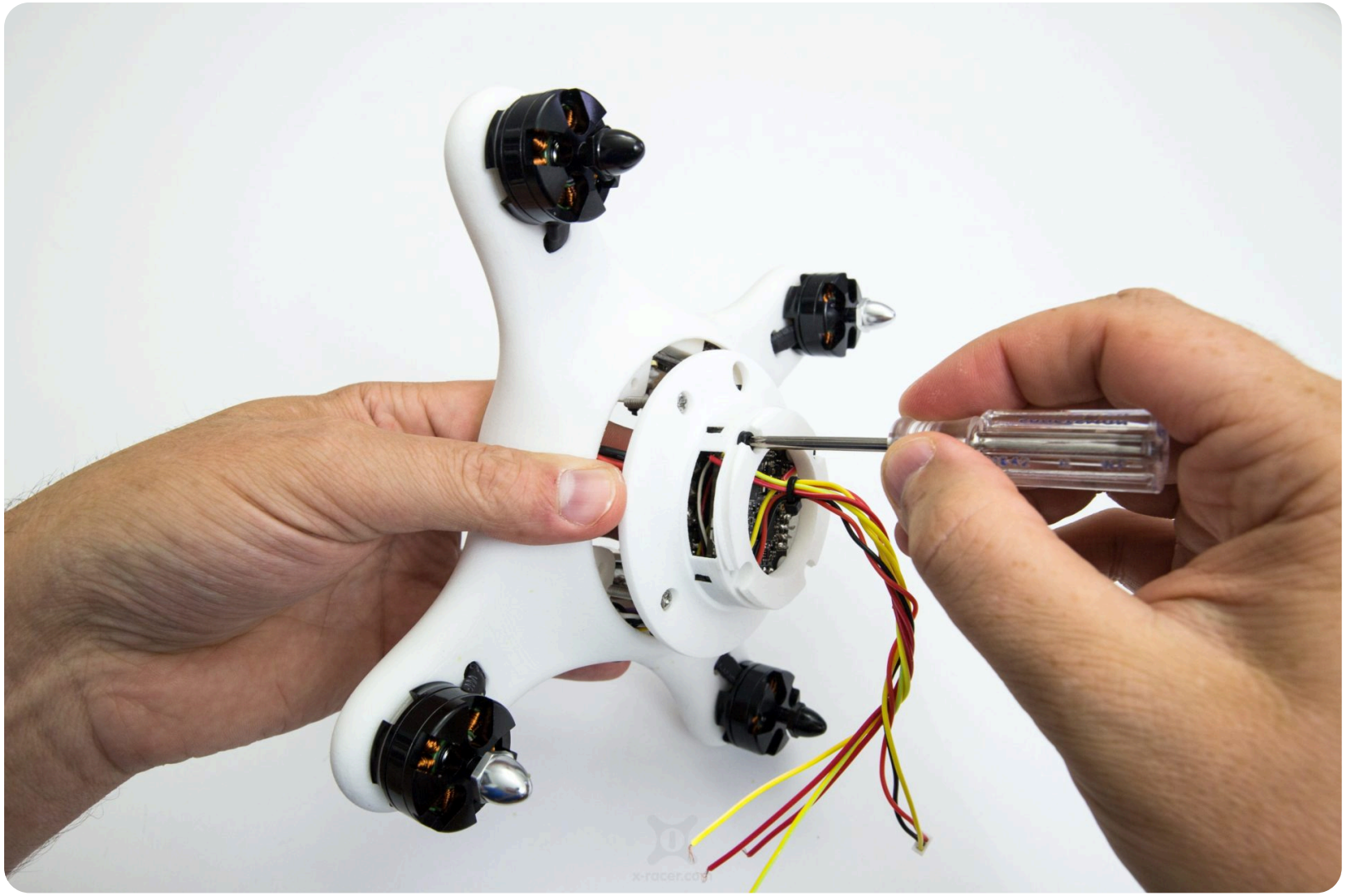
19

Step 19 of 40



20

Step 20 of 40



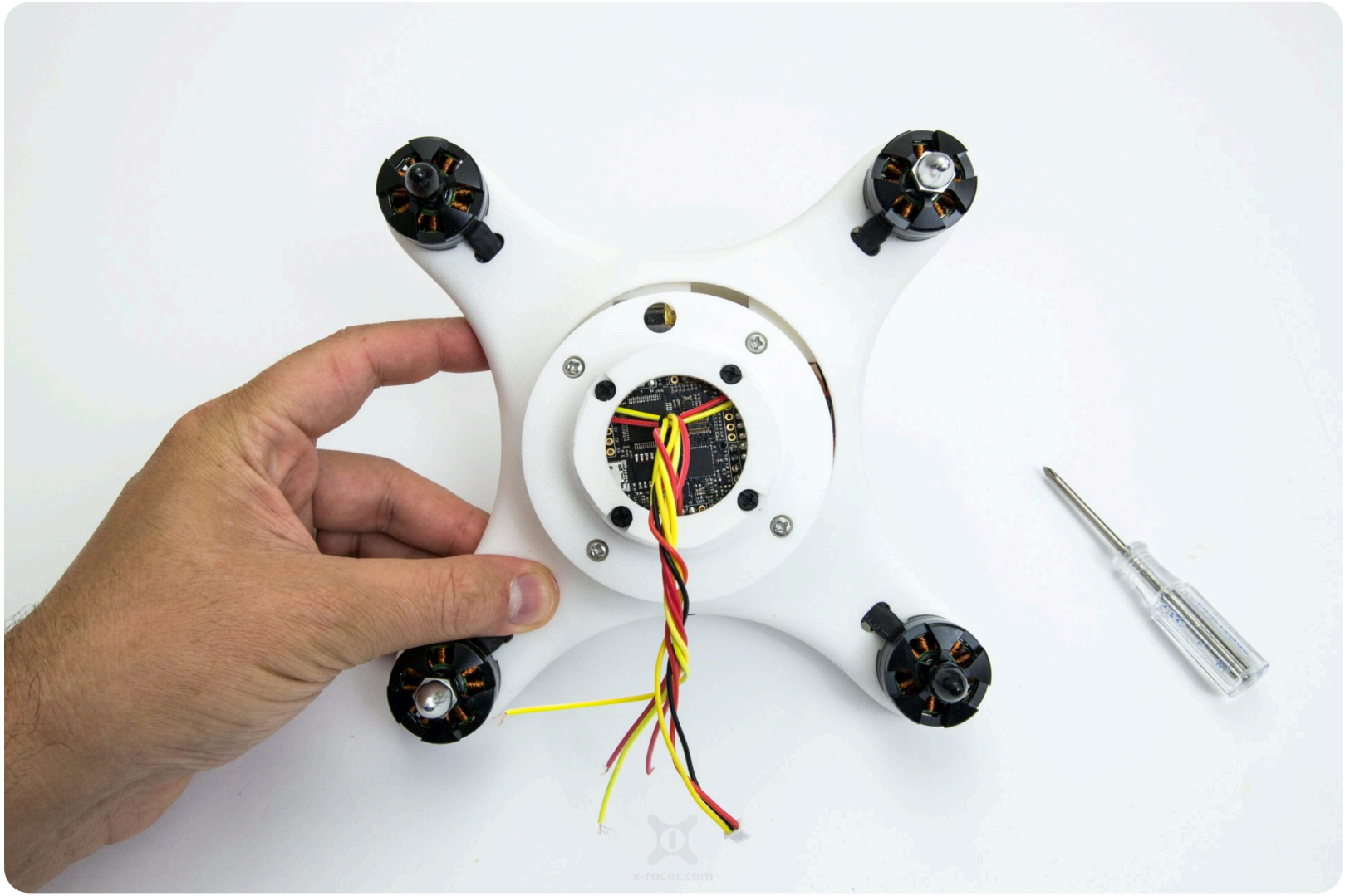
21

Step 21 of 40



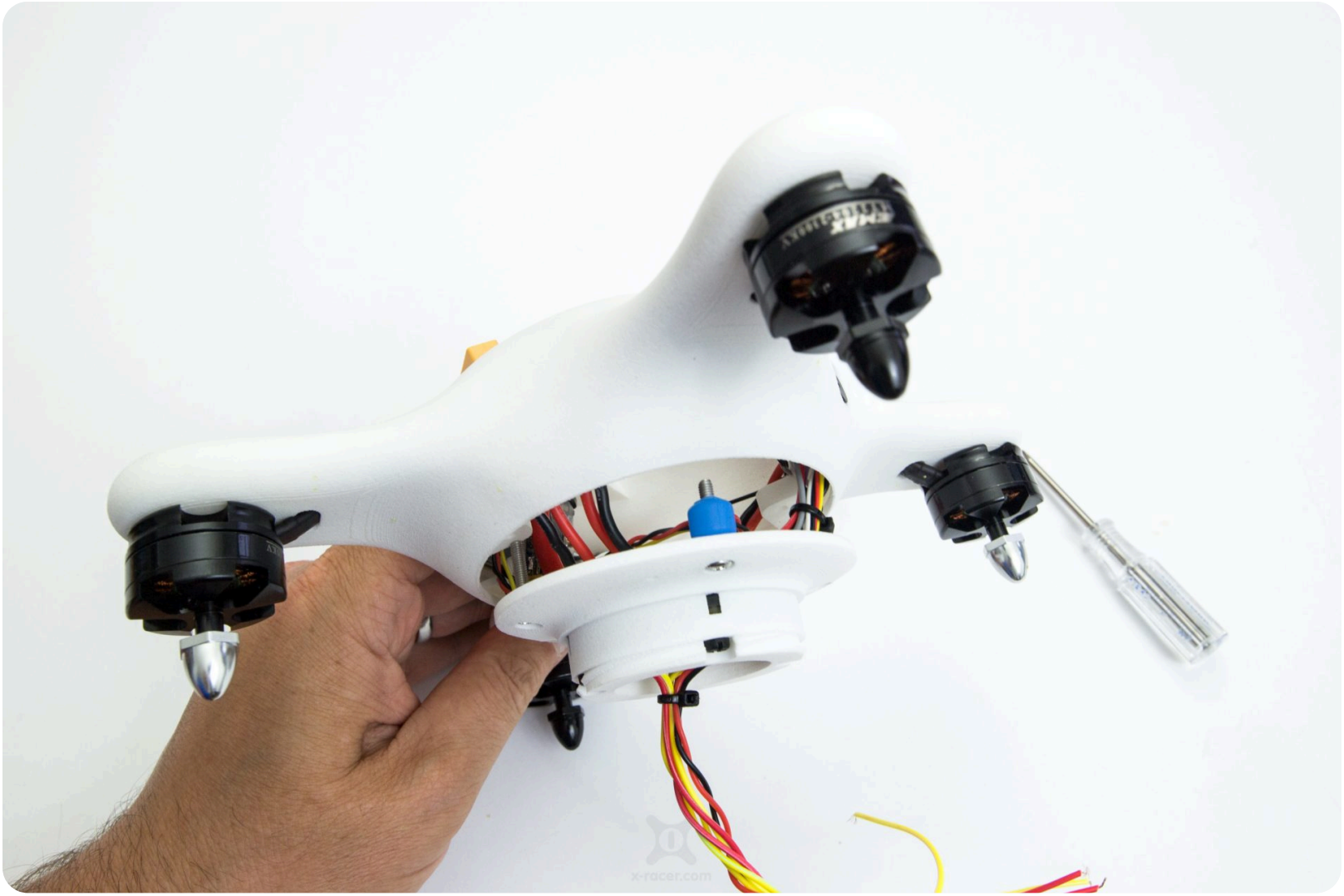
22

Step 22 of 40



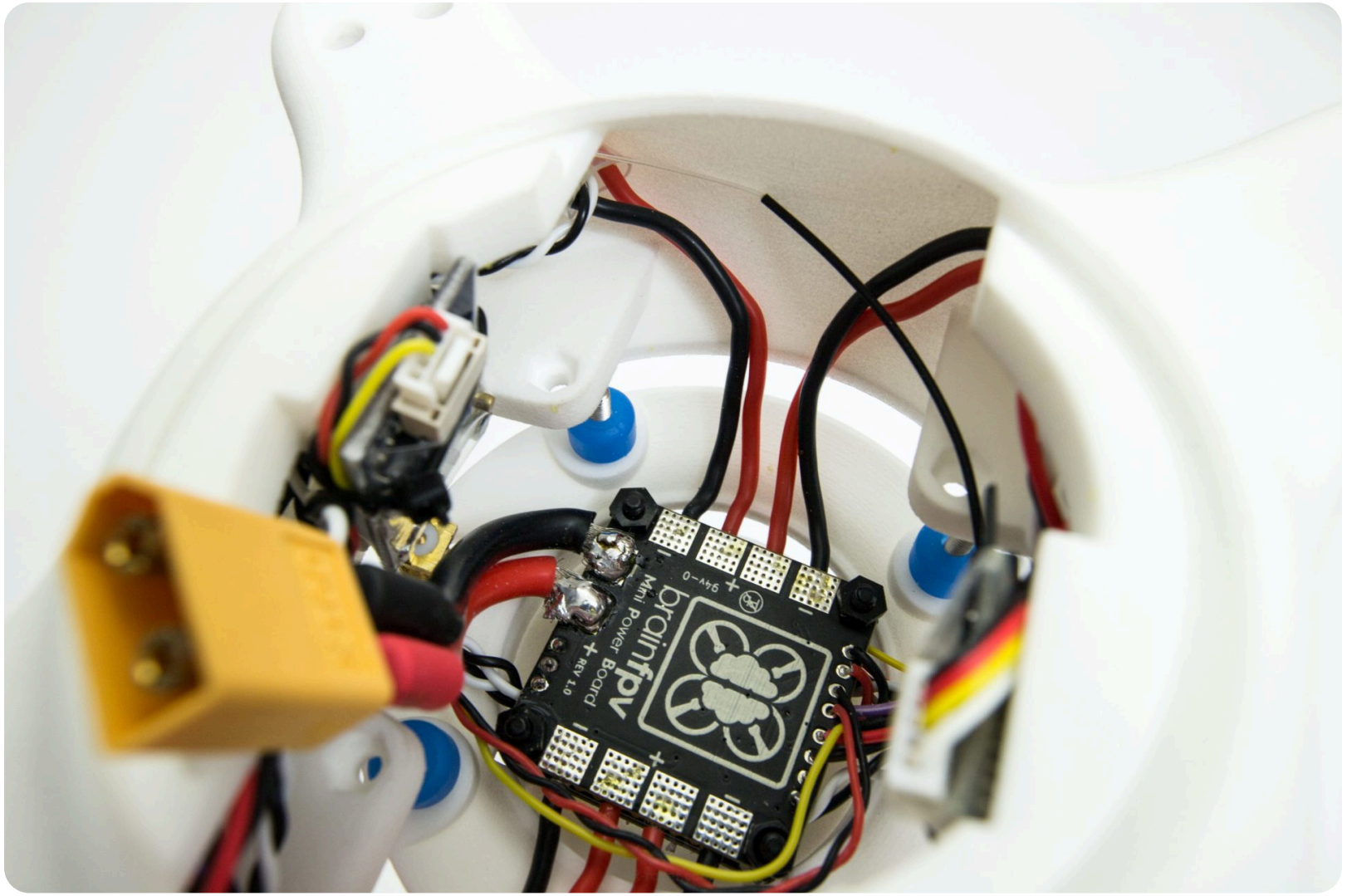
23

Step 23 of 40



24

Step 24 of 40



25

Step 25 of 40



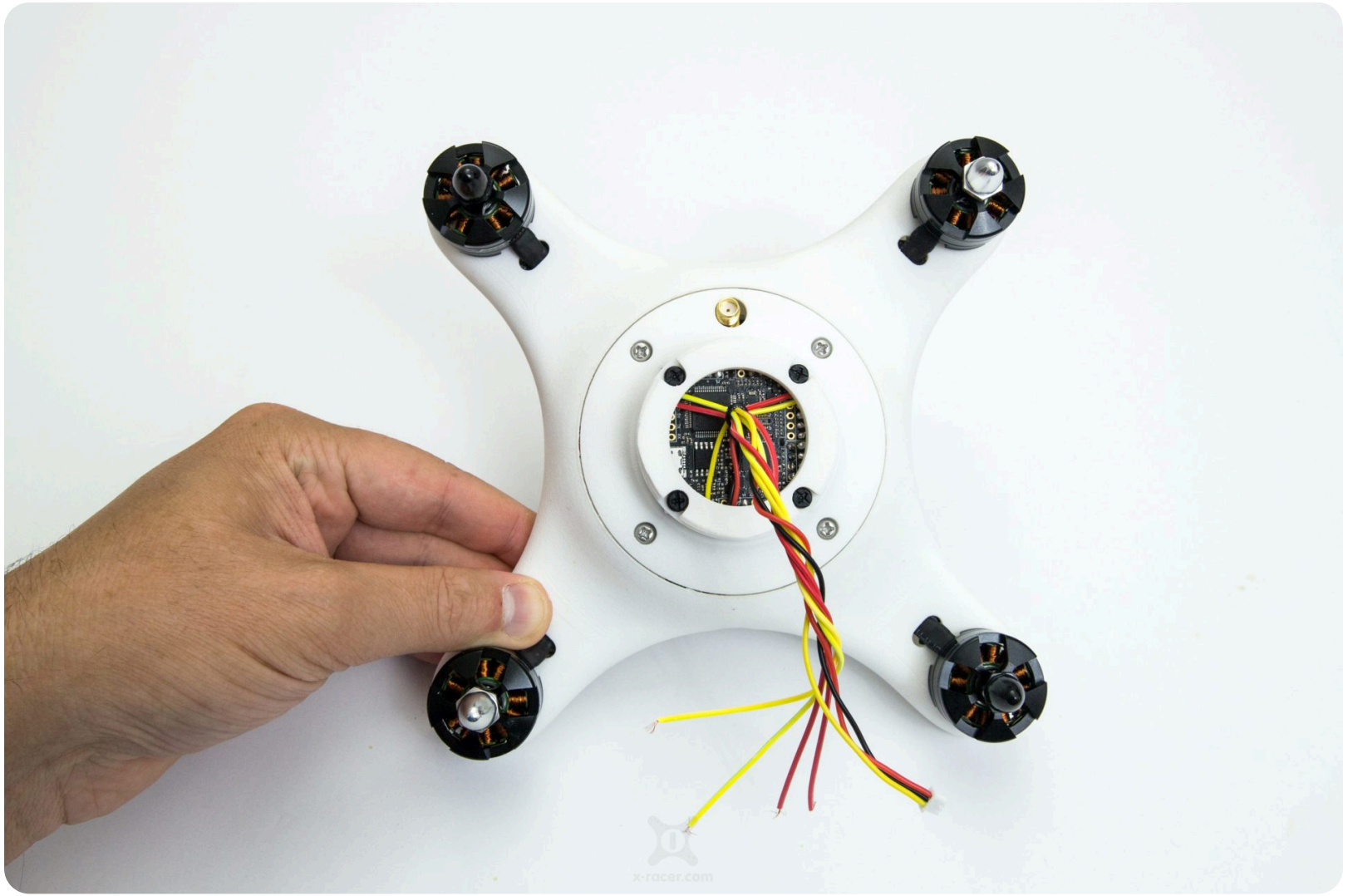
26

Step 26 of 40



27

Step 27 of 40



28

Step 28 of 40



29

Step 29 of 40



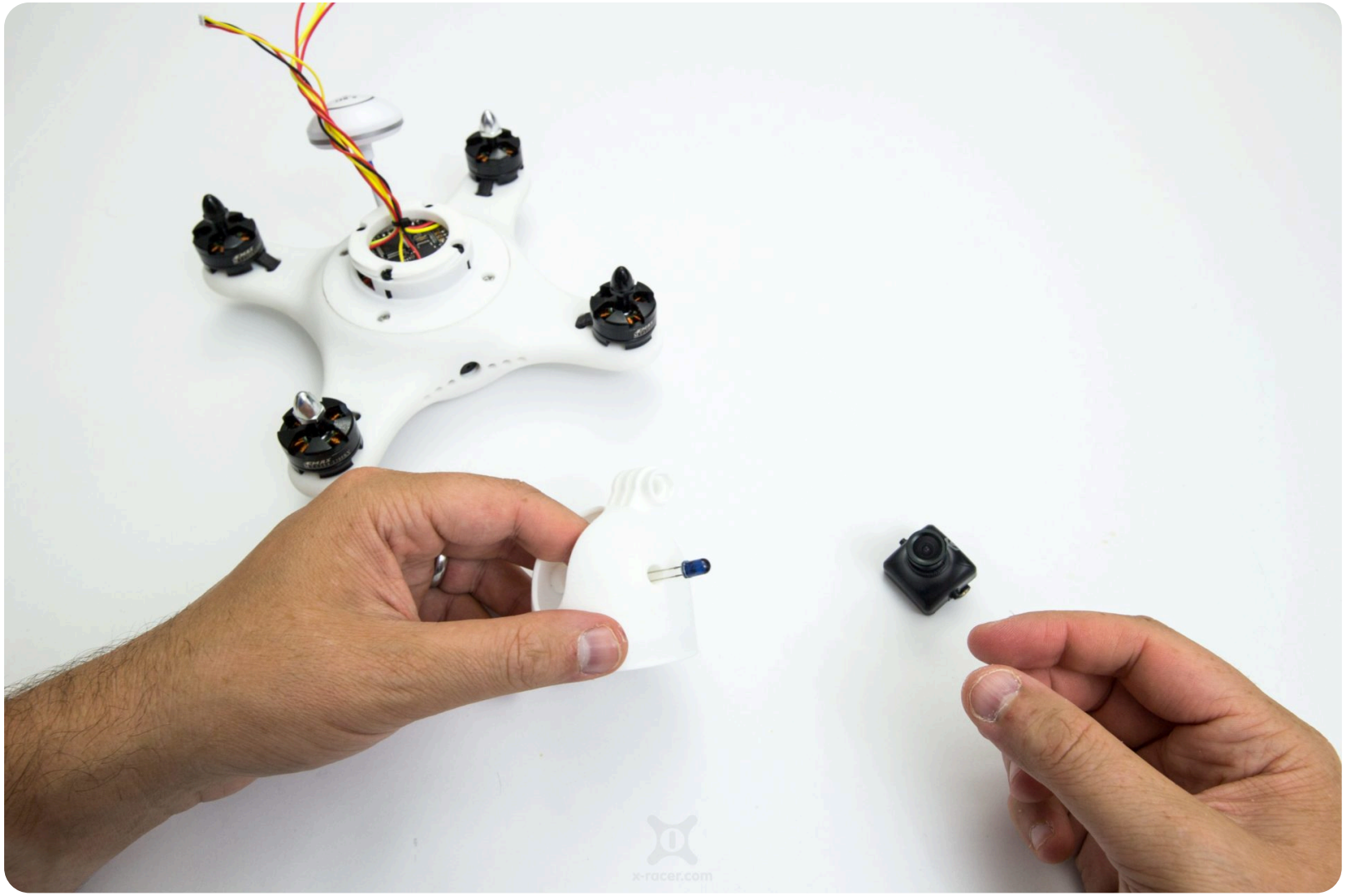
30

Step 30 of 40



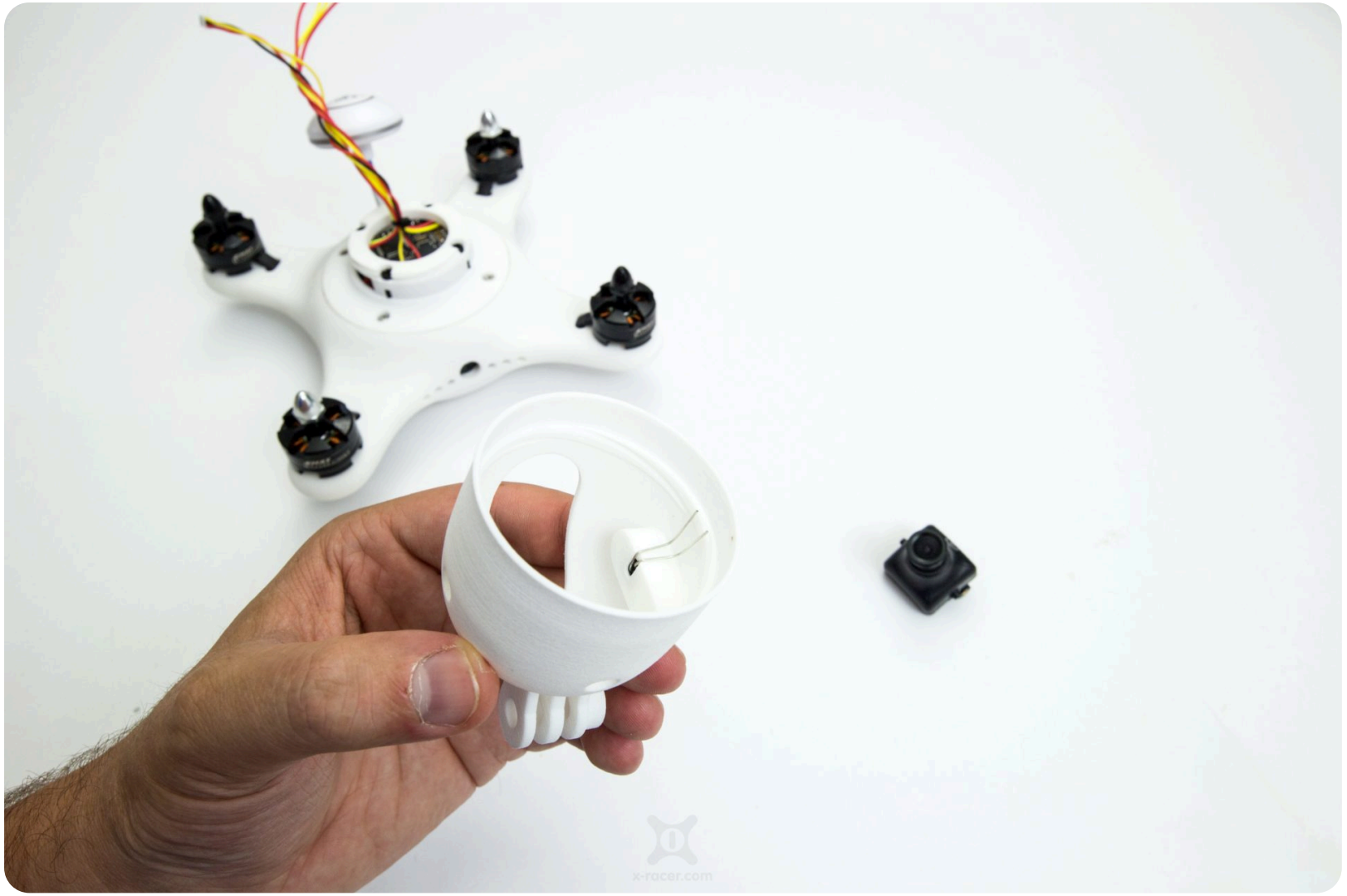
31

Step 31 of 40



32

Step 32 of 40



33

Step 33 of 40



34

Step 34 of 40



35

Step 35 of 40



36

Step 36 of 40



37

Step 37 of 40



38

Step 38 of 40



39

Step 39 of 40



40

Step 40 of 40

AK3D.DE

XO1, designed and built by André Kutscherauer. ak3d.de/xo1fpv