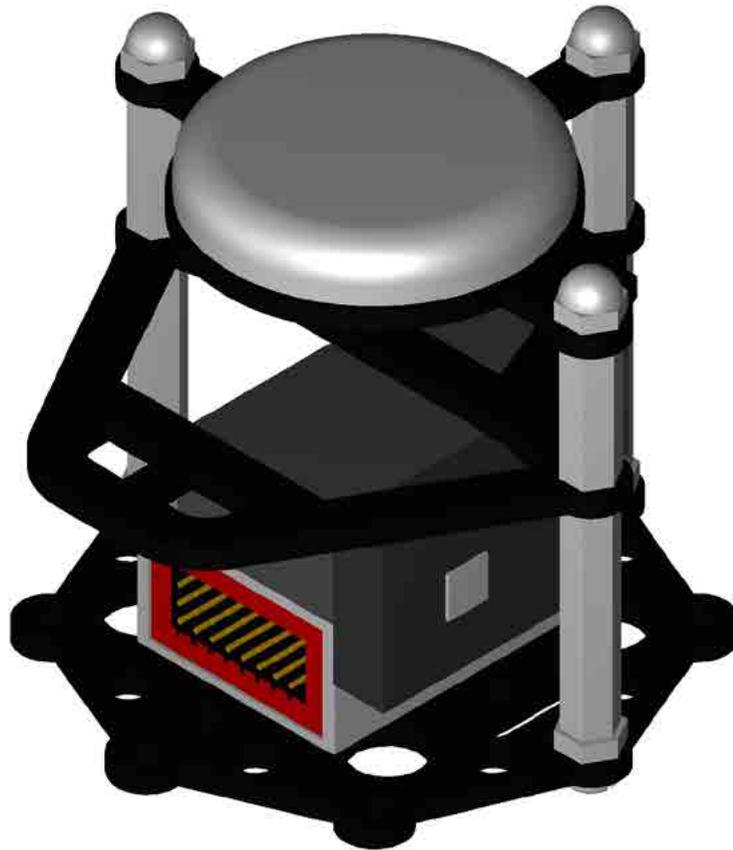


Universal NAZA Mount Assembly

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These instructions will take you through the process of assembling the Universal NAZA Mount (UNM).

Tools Needed For This Chapter

- Flat head screwdriver
- Razor Knife

Components Needed For This Assembly

Kronos Robotics sells a set of cut platform parts that are used to assemble the UNM. This set of parts represent the most economical way to create a UNM. You will still need the following hardware.

- 3, #6-32 x 7/16 Nylon Machine Screw
- 3, #6-32 Nylon Hex Nut
- 6, #6-32 Nylon Acorn Nut
- 3, #6-32 x 1-1/4" Nylon Standoff
- 3, #6-32 x 3/4" Nylon Standoff

I don't recommend using steel hardware as they add weight and can interfere with the Compass if you are going to use the GPS unit. Use aluminum or nylon hardware.

In addition Kronos Robotics also sells a UNM basic kit that contains the platform parts, as well as the nylon hardware mentioned above.

You will also need the following:

- 10, Small tie wraps
- Double sided foam tape
- 5-7, servo extenders (used to make wiring harness)

Mounting Screws

The UNM is attached to the craft via four #6 machines screws that have been attached to your craft. The screws are mounted on a square 2-1/32" wide, as shown in Figures 1.1 and 1.1.

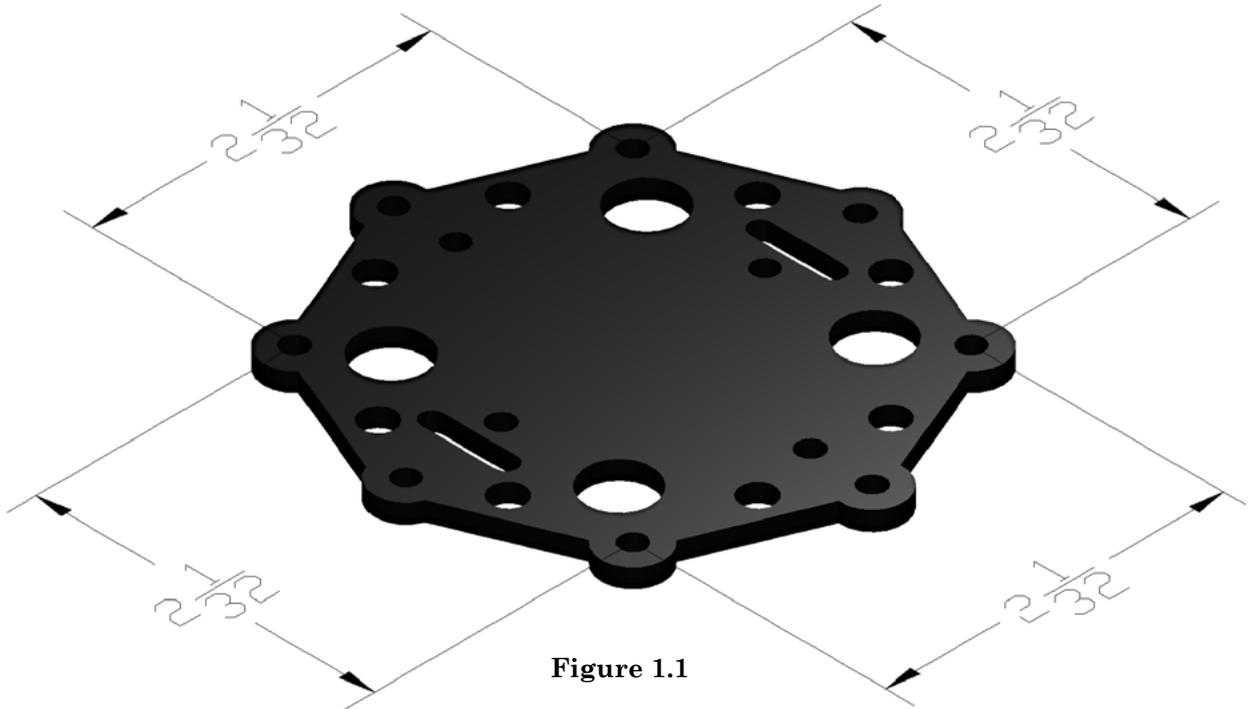


Figure 1.1

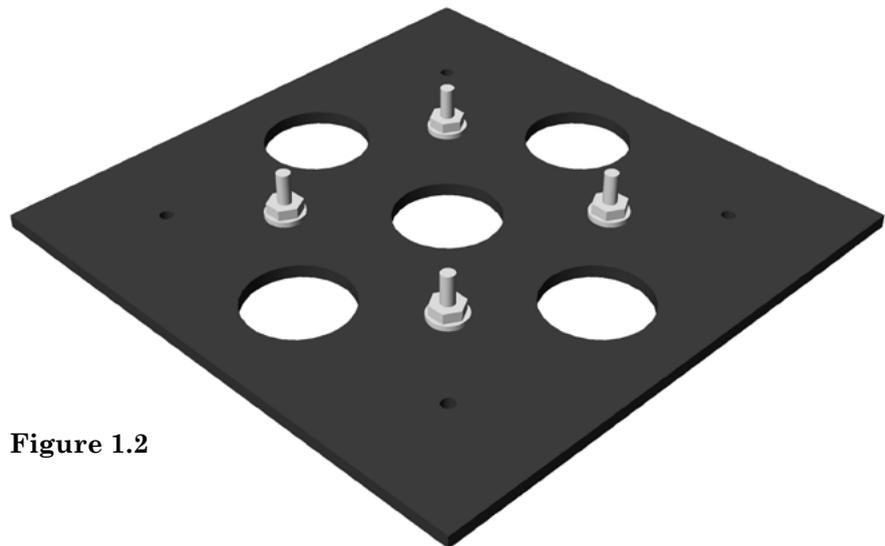


Figure 1.2

Step 1 - Detatch Parts

Remove the four mount components from the sheet. Remove the small tabs with a razor knife. As an option you may want to leave the internal cutouts in place. This will make attaching items to the parts easier if you are using adhesive foam squares.

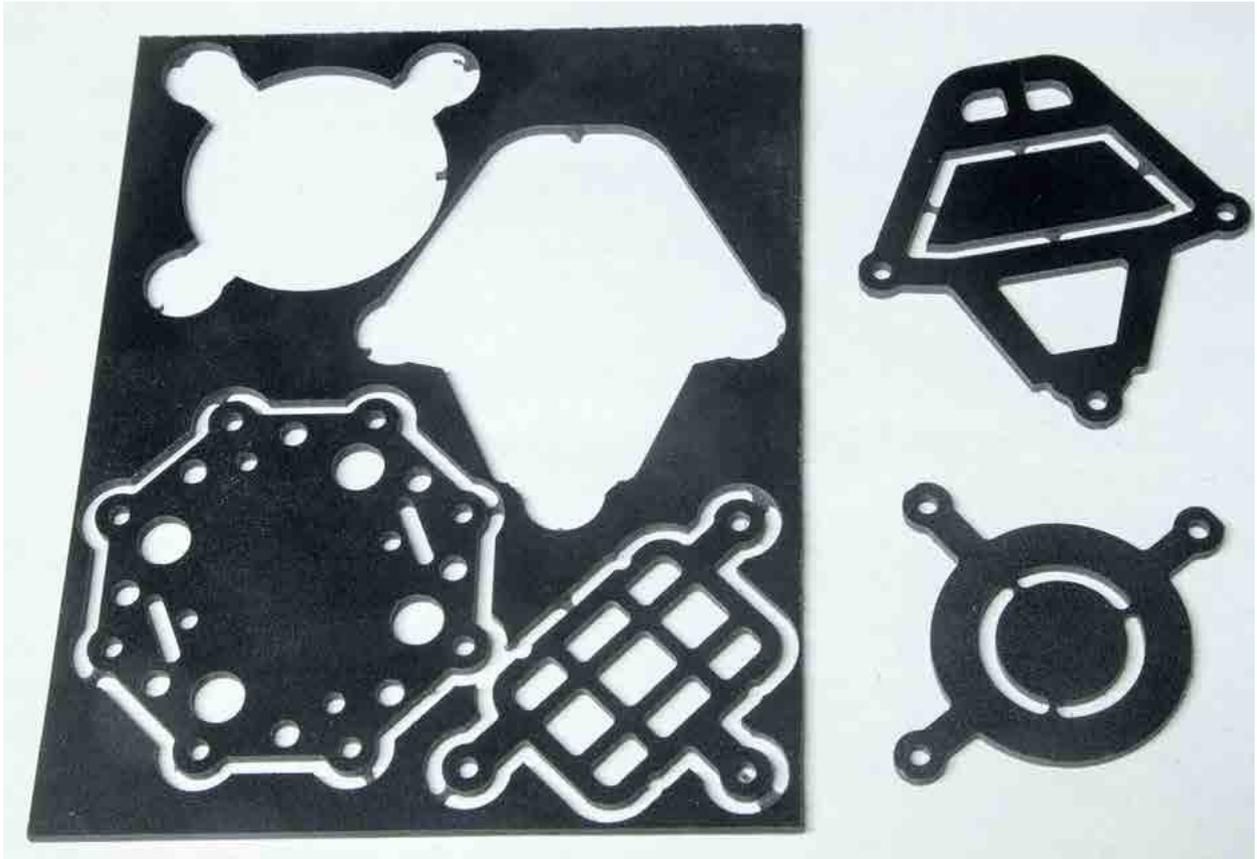


Figure 1.3

Step 2 - Attach NAZA Guide

Using a #6 screw attach the provided guide to the lower base of the NAZA mount as shown in Figure 1.4.

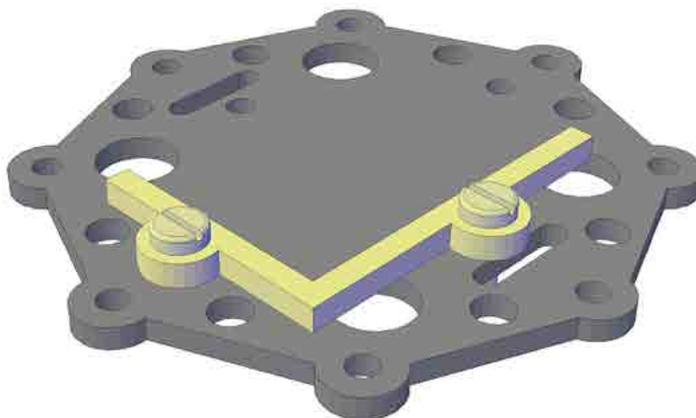


Figure 1.4

Step 3 - Attach NAZA

Add some double sided foam tape to the bottom of the NAZA and stick it to the base as shown in Figure 1.5.

The best way to do this is to edge the NAZA against the guide then press down to seat the foam tape.

The rear of the NAZA is shown here. You can tell the rear of the NAZA by the two extra connectors on the top.

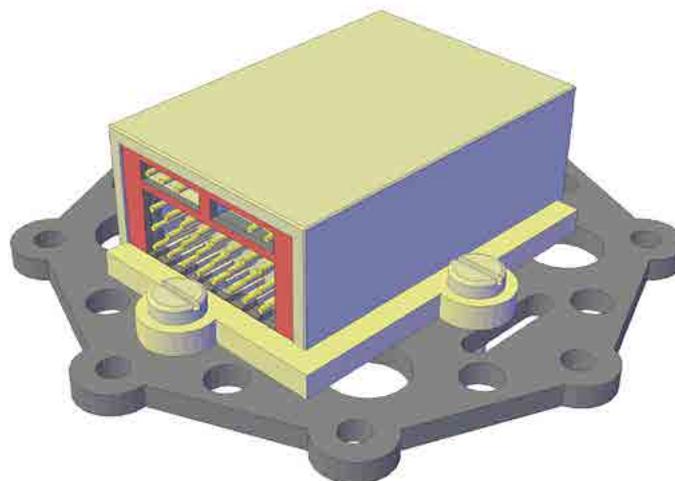


Figure 1.5

Step 4 - Attach Receiver

Place some double sided foam on the bottom side of your receiver and attach it to the top of the NAZA. You will need to attach the foam tape near the front of the NAZA due to its shape. The servo connections on the receiver should face the rear of the NAZA.

Once side of the receiver should be flush with the side of the NAZA, as shown in Figure 1.6.

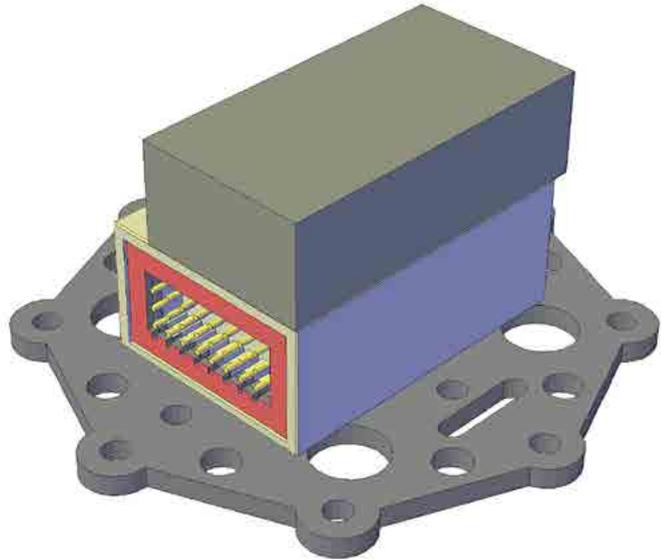


Figure 1.6

Step 5 - Attach VU

Add some double sided foam tape to the bottom of the VU and stick it to the receiver and NAZA as shown in Figure 1.7

You want the VU to be flush with the top of the receiver. This should give you enough clearance to be able to attach the mounting nuts.

The wires on the VU should face the rear of the NAZA.

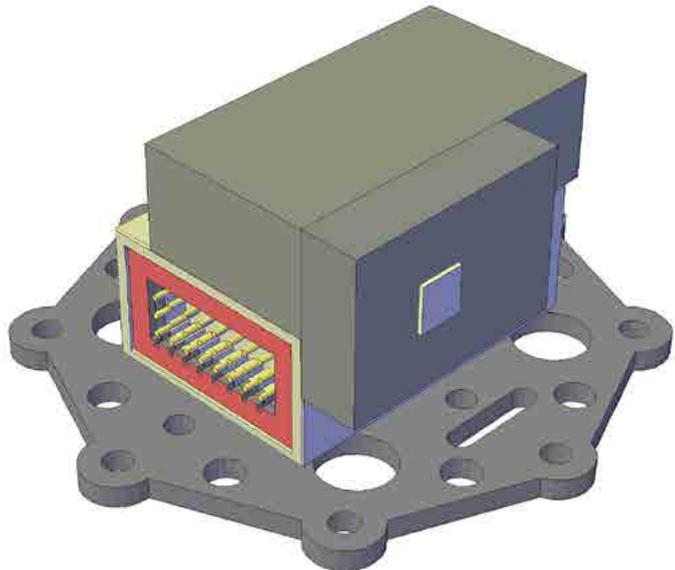


Figure 1.7

Step 6 - Add Platform Screws

Insert three #6-32 x 7/16" machine screws to the holes in the base and hold in place with three hex nuts, as shown in Figure 1.8.

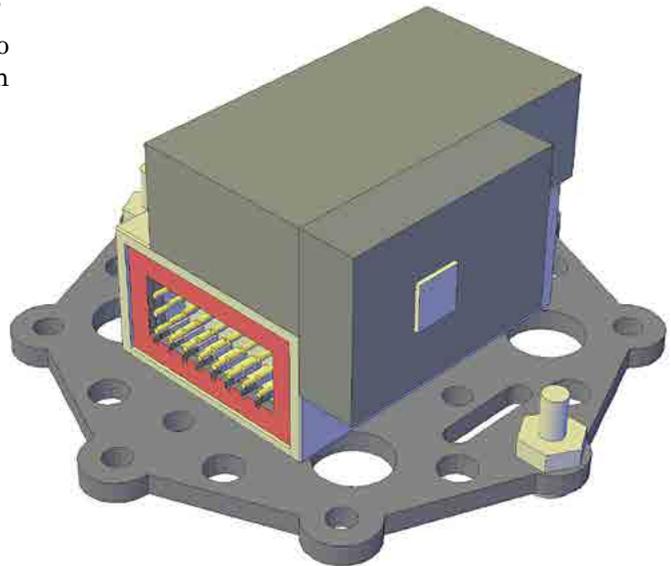


Figure 1.8

Step 7 - Attach Standoffs

Add a 1-1/4" standoff to each of the machine screws, as shown in Figure 1.9.

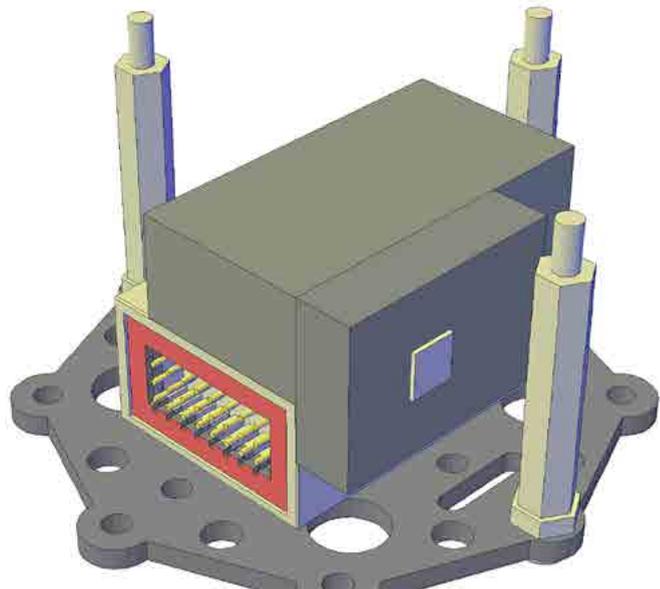


Figure 1.9

Step 8 - Attach Upper Platform

Slip the upper platform over the three stand-offs as shown in Figure 1.10.

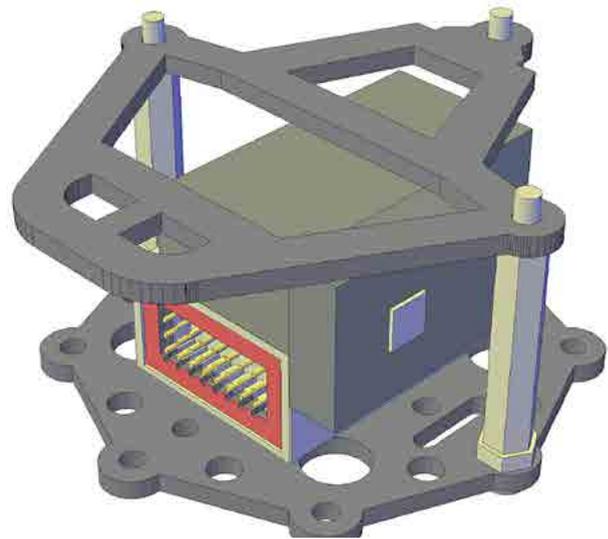


Figure 1.10

Step 9 - Secure Platform

If you are not going to add the GPS unit you can secure the upper platform with three acorn nuts, as shown in Figure 1.11.

If you are not installing the GPS unit you can skip steps, 10, 11, and 12.

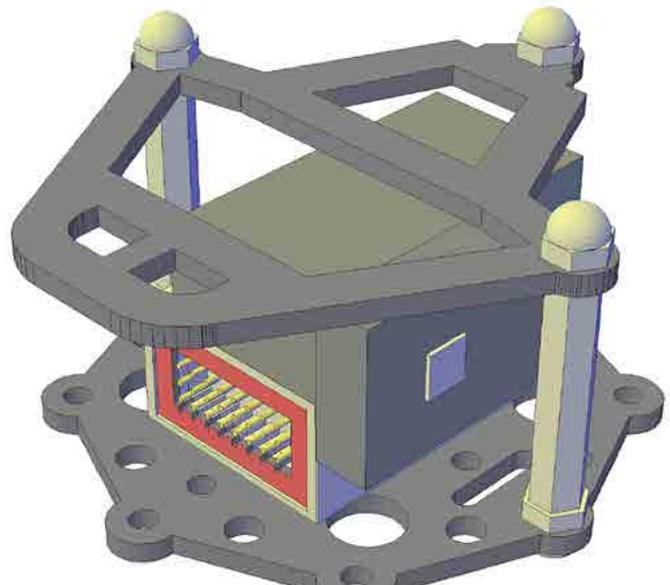


Figure 1.11

Step 10 - Add Standoffs

Add a 3/4" standoff to each of the lower standoffs, as shown in Figure 1.12.

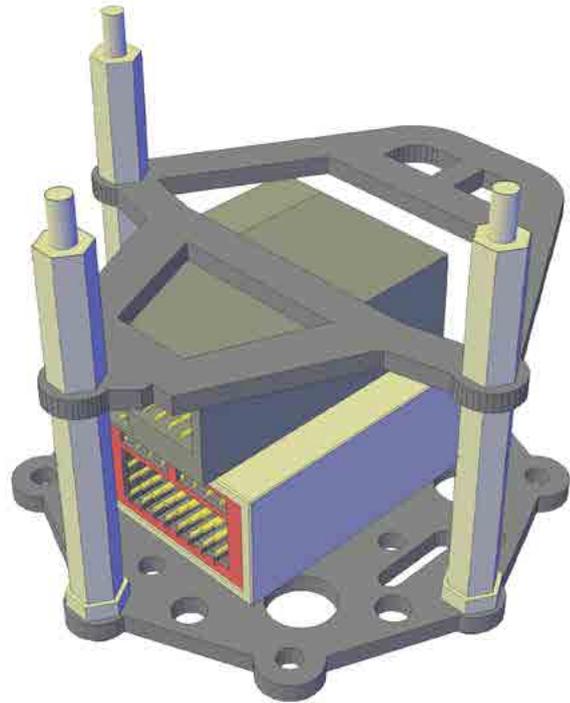


Figure 1.12

Step 11 - Attach GPS

Using double sided foam tape, attach the GPS unit to the GPS platform, as shown in Figure 1.13.

The cable sticks out the front of the GPS.



Figure 1.13

Step 12 - Secure the GPS

Slip the GPS platform over the three standoffs and secure with three acorn nuts, as shown in Figure 1.14.

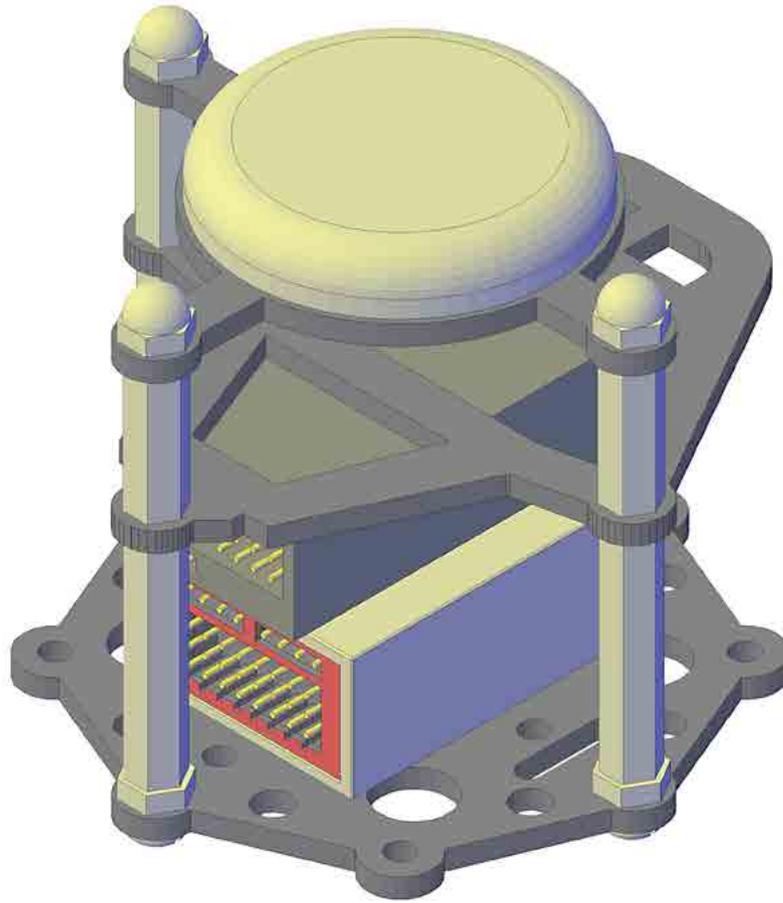


Figure 1.14

Step 13 - Attach NAZA Mount

Slip the UNM over the four screws as shown in Figure 1.15. Make sure the front of the UNM is facing the front of the craft. The rear of the UNM is the end with the standoff.

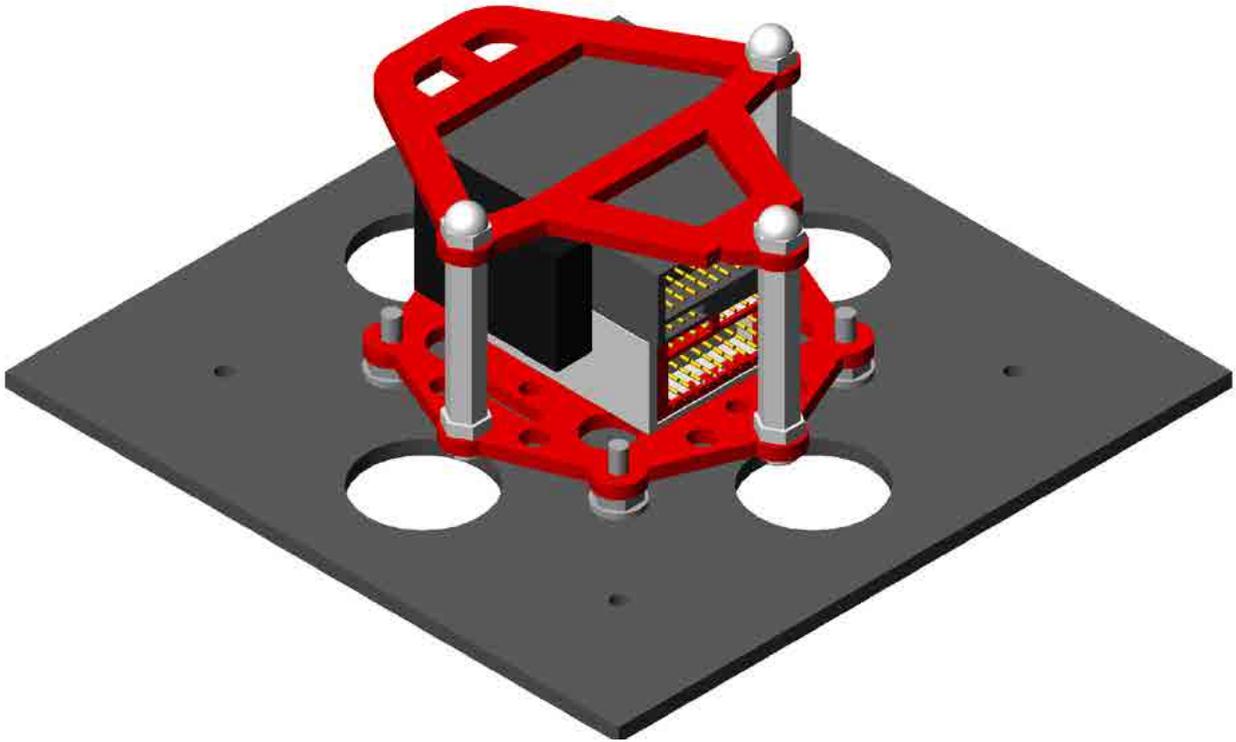


Figure 1.15

Step 14 - Secure UNM

Secure the UNM with four 6-32 acorn nuts, as shown in Figure 1.16.

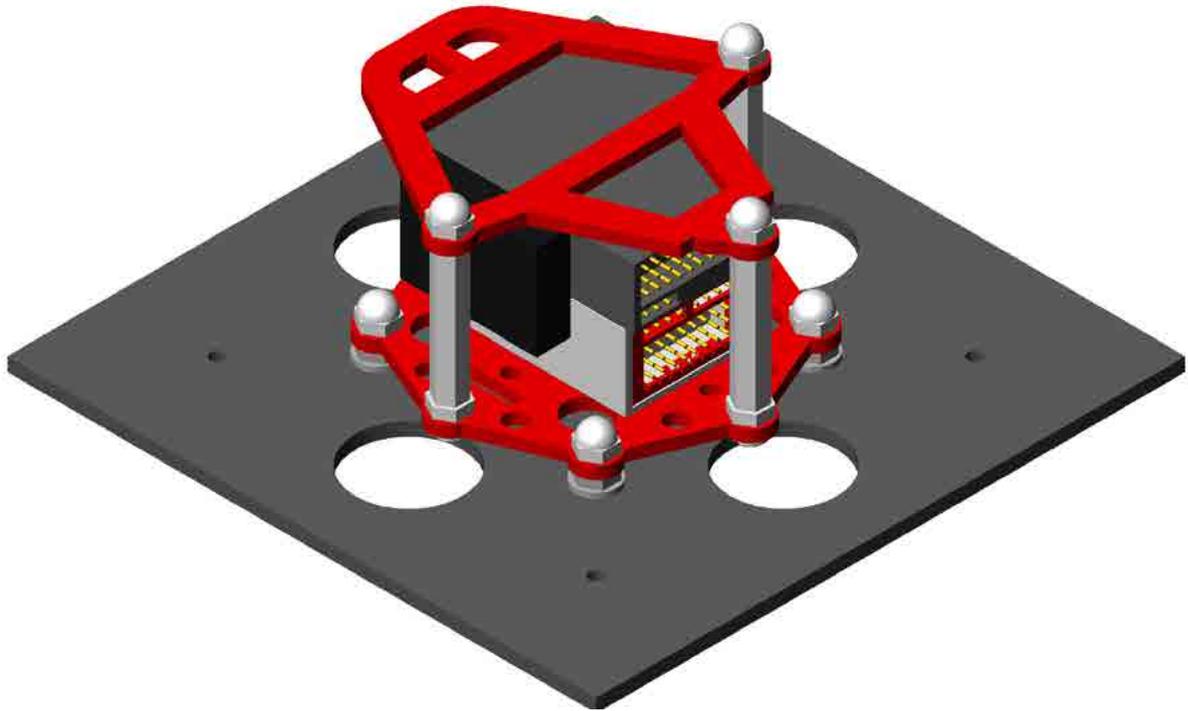


Figure 1.16

NAZA Wiring

Step 15 - Make ESC Harness

The goal for using a universal mount is to have the ability to quickly swap the controller from craft to craft. Plugging your ESC cables directly into the NAZA kind of defeats this goal. A set of 10cm servo extenders will make the task of swapping the NAZA much easier. Plug the extenders into NAZA motor sockets and label the ends, as shown in Figure 1.17. You should also label your ESC control cables as well.



Figure 1.17

Step 16 - Wire VU

Connect the four pin connector to the top left socket, and the three pin connector to the far right socket, as shown in Figure 1.18.



Figure 1.18

Step 17a - Futaba SBus Connection

If you are using a Futaba or Futaba Compatible receiver with an SBus connector, you can connect the receiver to the NAZA using a single wire, as shown in Figure 1.9.



Figure 1.19

Step 17b - Standard Receiver Connection

If you are not using an SBus compatible receiver, you will have to connect at least five of the channels to the NAZA, as shown in Figure 1.20. Here I am connecting channels 1-7 to the NAZA.



Figure 1.20

Step 18 - VU Power

The NAZA gets its power from the VU. The VU gets its power directly from your battery. In a permanent configuration the power leads on the VU would be soldered to the battery connector or power harness. Since we want a quick connect I cut a servo extender in half and use it to make a power harness for the VU. One end is connected to the VU leads, as shown in Figure 1.9. The other is wired to the battery connector or power harness.

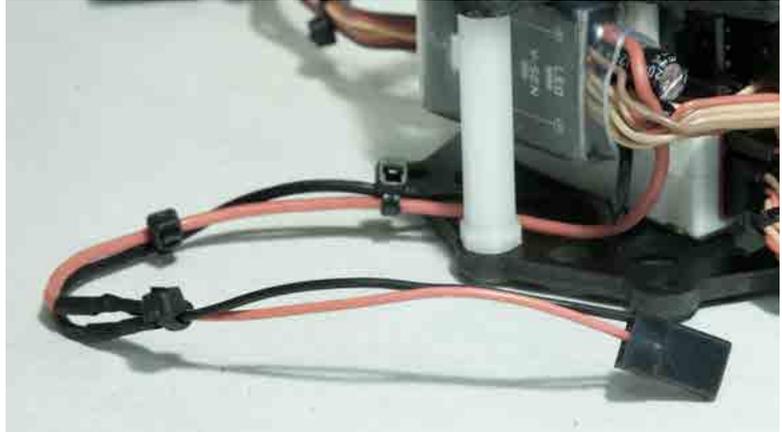


Figure 1.21



Figure 1.22

Figure 1.22 shows the wiring of a NAZA. Notice that I used the connectors that came with the NAZA. In most cases these connectors are easier to use.

Conclusion

This concludes the assembly instructions for the Universal NAZA Mount. Please note that is only a guide, and that you may need to configure your radio and NAZA differently. Figure 1.23 shows a configuration that works with small receivers. In this case I am using a FrSky 3/16 SBus receiver.

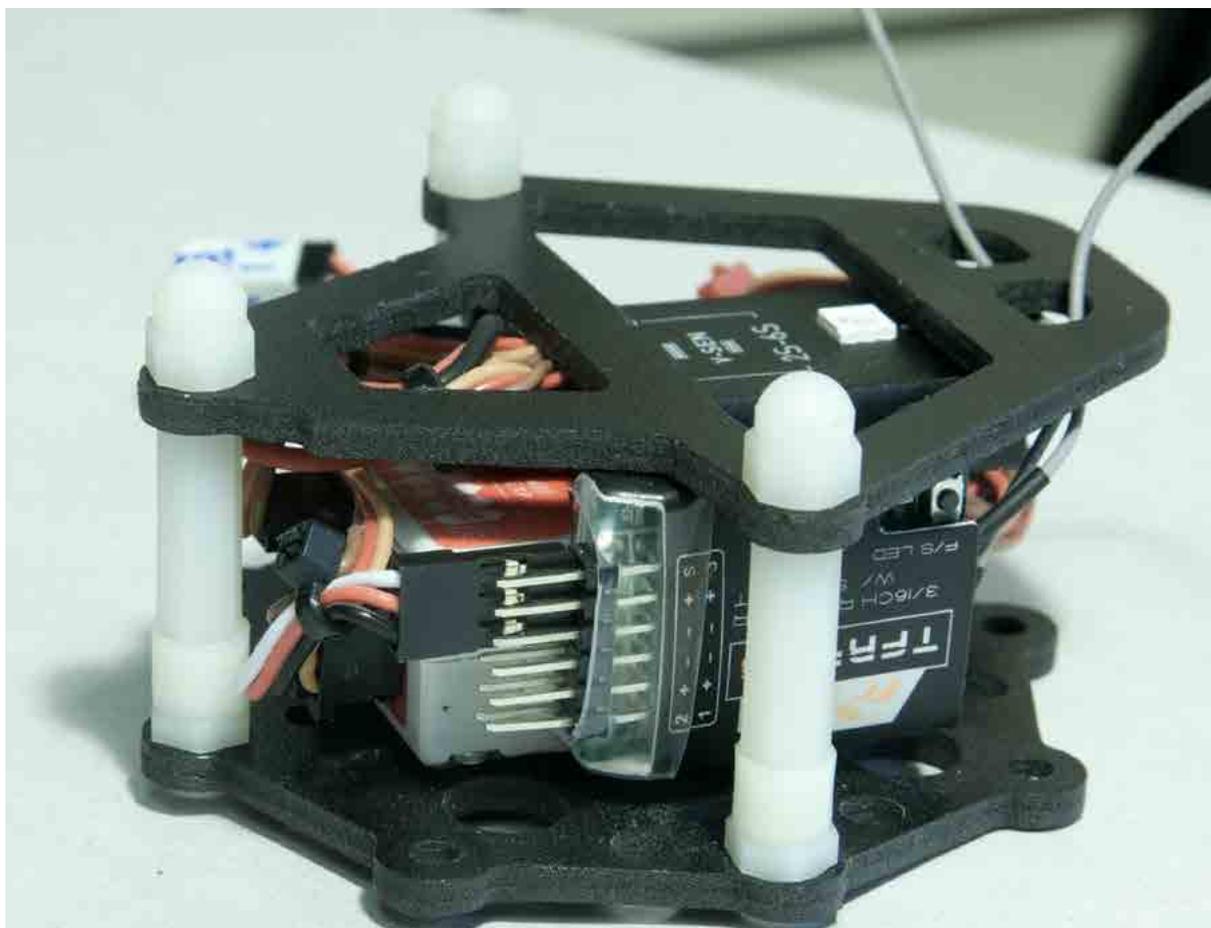


Figure 1.23

Figure 1.24 shows yet another configuration. In this configuration a Turnigy 9X receiver is attached to the top of the NAZA. The VU is attached to the top of the receiver and protrudes through the large cutout in the upper platform.

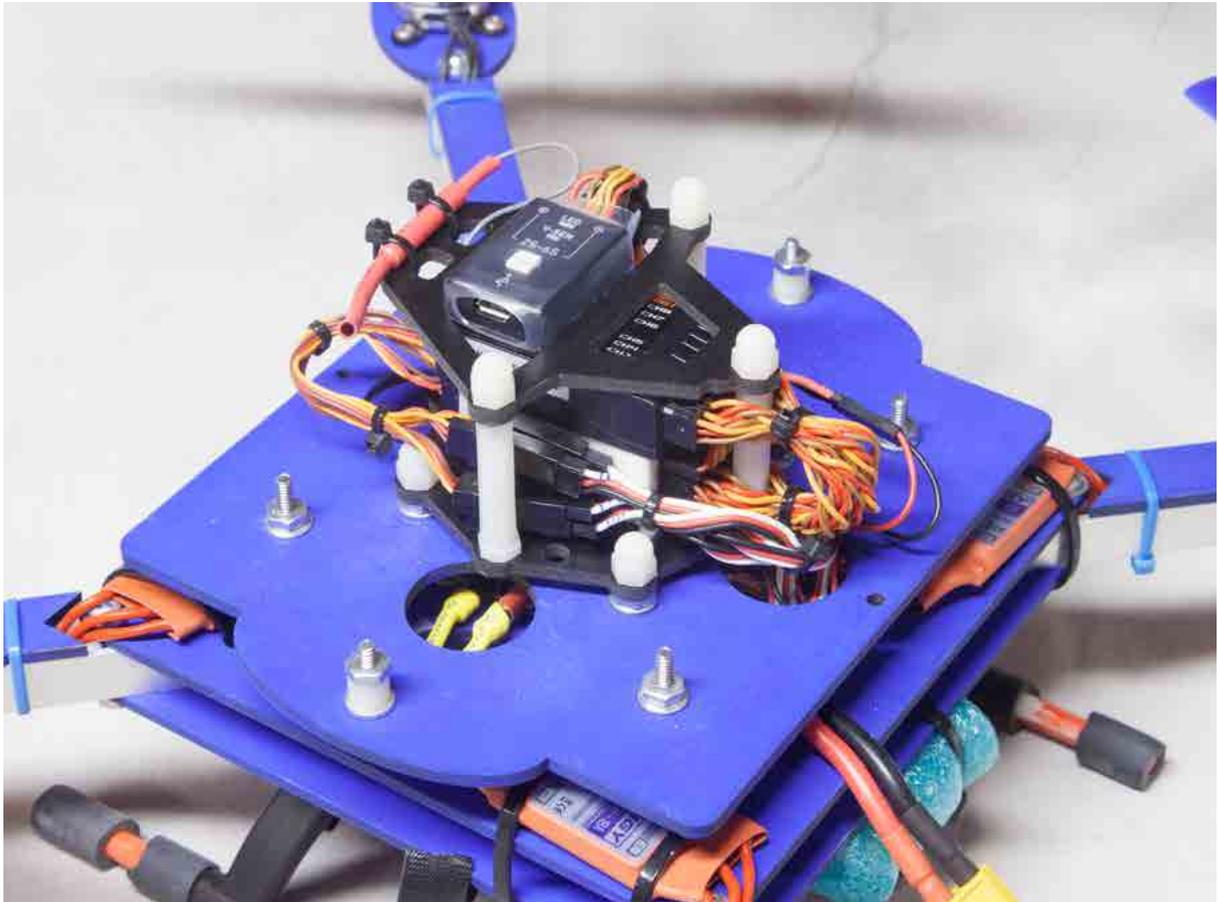


Figure 1.24