

Nerf Rayven Body Kit – Flatline Reactive

This mod takes an existing Nerf Rayven blaster and adds 3D printed parts to convert it into a firing Flatline Reactive.



Required Parts:

- NERF N-Strike Rayven CS-18 Blaster
- All 3D printed parts in the project .3mf file
- 18x M3x8 self-tapping screws
- 12x M3x14 self-tapping screws

Required Tools:

- Metric hex keys for screwing the self-tapping screws
- Adhesive (hot glue, CA glue, double sided tape)
- Spudger for removing supports

Rayven Preparation

First, open up the Rayven blaster by unscrewing all 17 self-tapping screws (shown in blue). The blaster must be opened so that the Rayven front attachment print can be put in.



NOTE: the screws for the rail on the top are shorter than the others.

During this step, you may also do any additional mods to the blaster (ex. upgrading motors) or spray painting each part of the blaster.

Connecting Rayven Front Attachment Print

Attach the Rayven front attachment by lifting up the barrel (shown in blue) and sliding the front attachment over the barrel. Make sure the lowers tabs (shown in purple) on the front attachment sit under the front flange of the blaster half and the top tab (shown in red) sits between the opening on the rail.



Make sure that the side rail is removed from the blaster. Currently, this will interfere with the barrel.



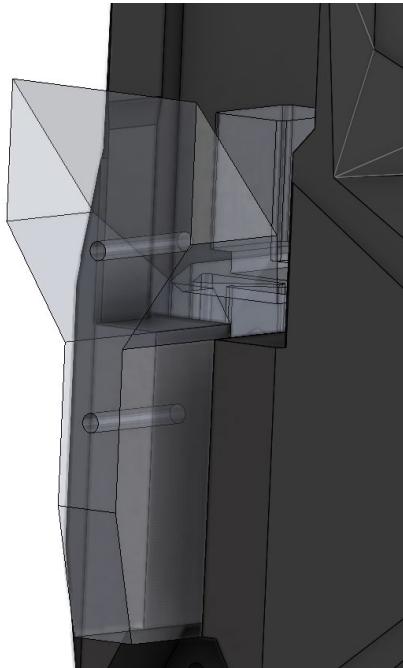
Once wedged in, place the other blaster half over and put the blaster back together with all the self-tapping screws.



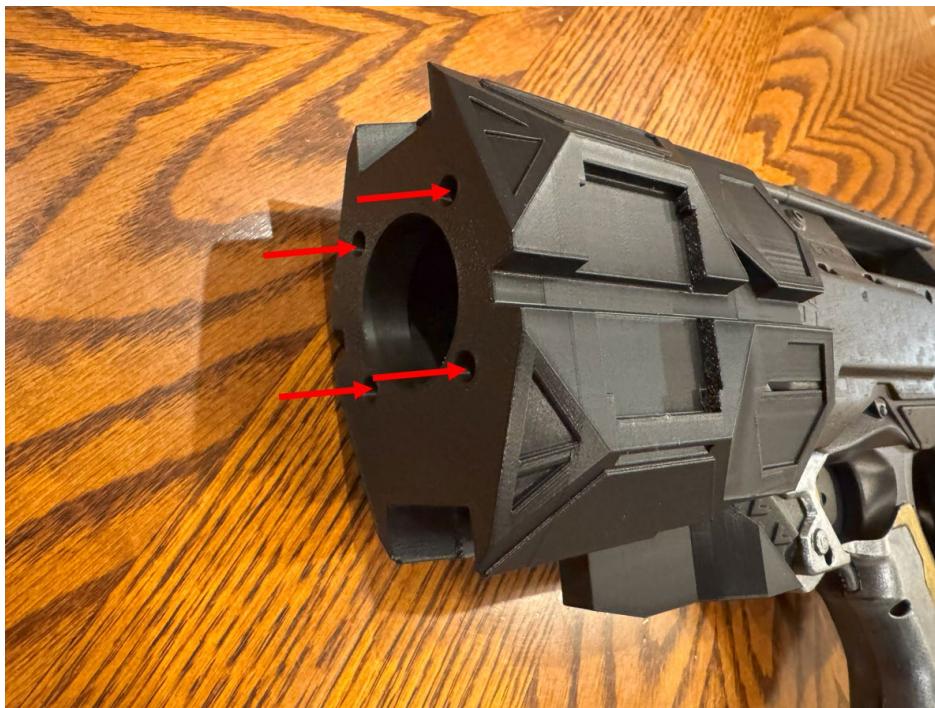
Insert the mag and batteries to double check that the electronics are working as expected.

Connect the Close Barrel Segment

Slide the close barrel segment over the front attachment, making sure that the bottom of the front attachment aligns with the gap on the close barrel segment.



Then, screw in 4 of the M3x14 self-tapping screws to lock the parts together.



Connecting the Middle Barrel Segment

Slide on the middle barrel segment over the close barrel segment. The middle barrel segment should be oriented so that the handgrip attachment feature (shown in red) is facing on the bottom of the blaster and aligned with the handgrip attachment feature (shown in green) of the Rayven front attachment.



Once slid on, connect the middle and close barrel segments using 4 of the M3x14 self-tapping screws. There are 2 sets of 2 screws on the bottom and the top, shown below:



Connect the Far Barrel Segment

Slide on the far barrel segment onto the middle barrel segment like the past step. Ensure that the far barrel segment is oriented in the image below, with the triangle pocket (shown in red) on the tip of the segment on the bottom of the blaster facing downwards.



Once slid on (same as above), connect the far and middle barrel segments using 4 of the M3x14 self-tapping screws. There are 2 sets of 2 screws on the bottom and the top, shown below:

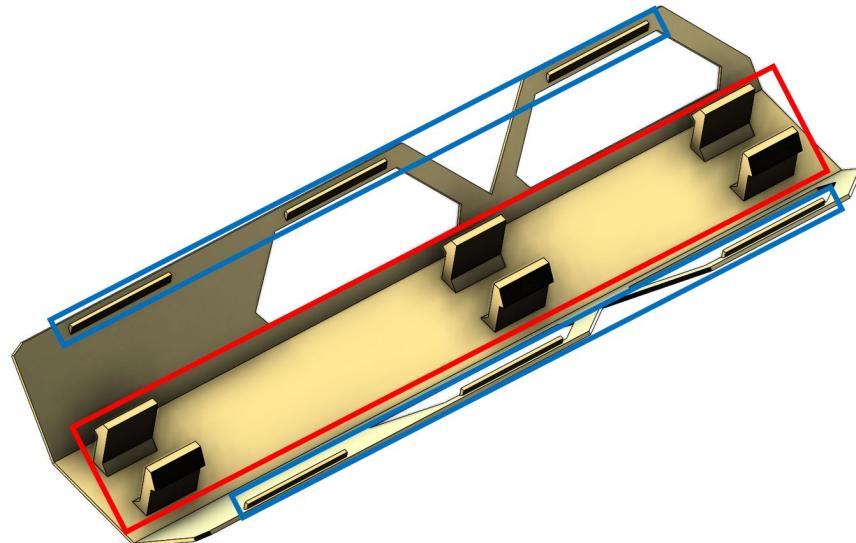


Attach All the Cover Plates

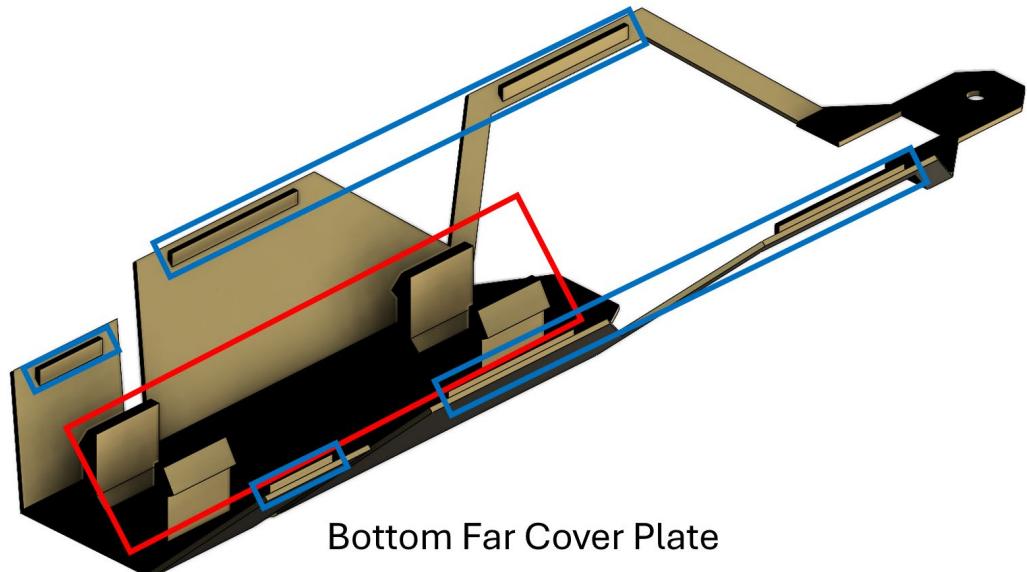
Attach all the cover plates to the barrel parts. Note that the far cover plates connect differently from the close cover plates.

Far Cover Plates

The far cover plates are designed to snap in place with the snap fit features shown in red. Also, there are locking features shown in blue that prevent the tabs from flipping outwards. The bottom far cover plate also locks in with a screw. The image below shows both the top and bottom far cover plates.



Top Far Cover Plate



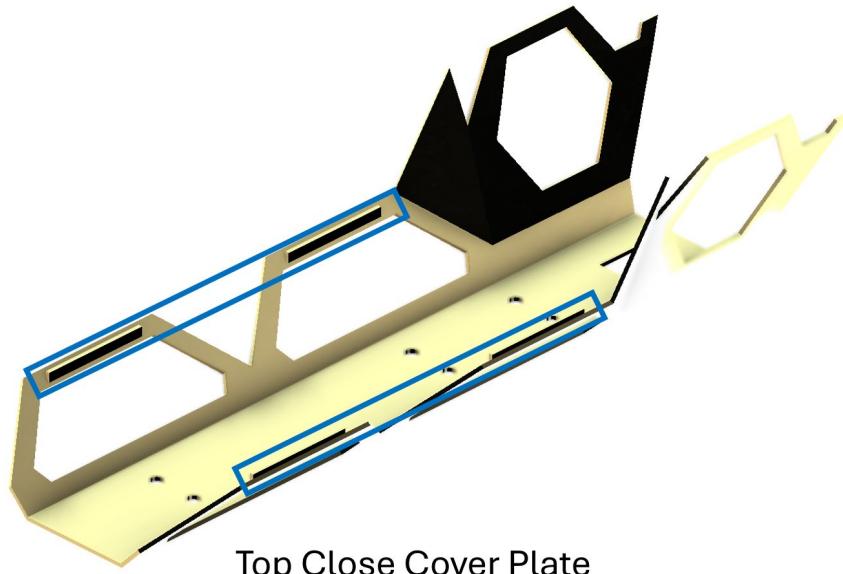
Bottom Far Cover Plate

These two far cover plates should lock into the barrel with a satisfying snap.

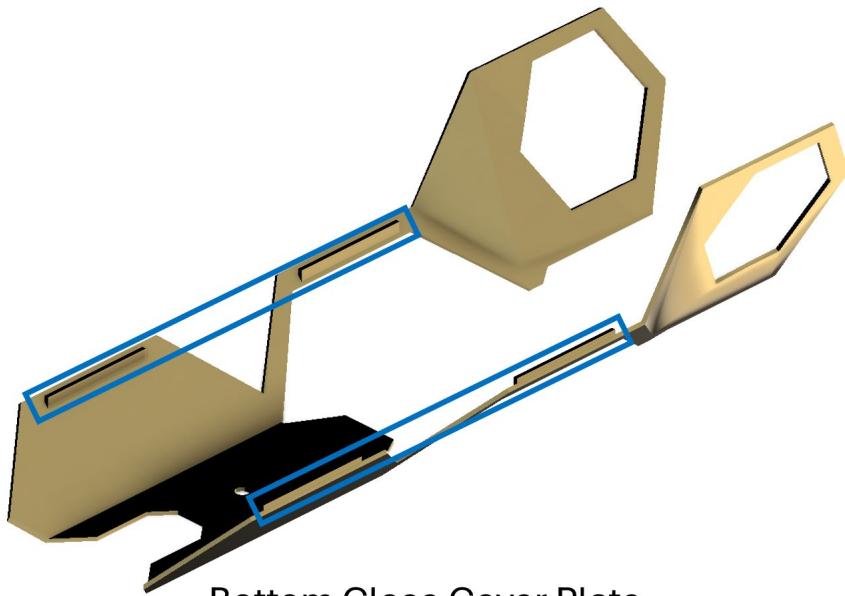


Close Cover Plates

The close cover plates only have the locking features shown in blue. They also use screws to lock in the plates. The image below shows both the top and bottom far cover plates.

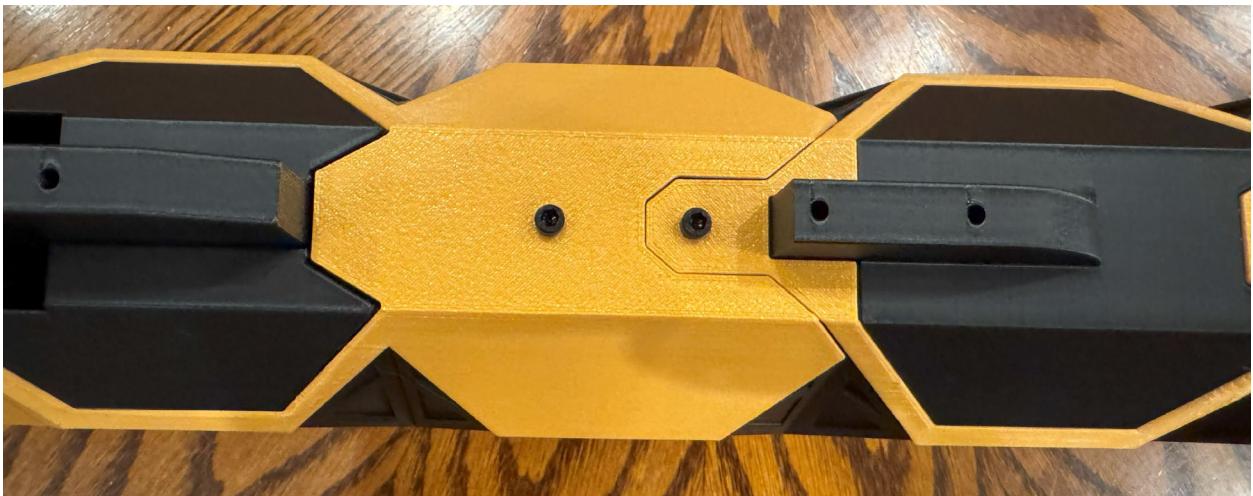


Top Close Cover Plate



Bottom Close Cover Plate

After attaching both bottom cover plates, lock both in with the M3x8 self-tapping screws.



After all cover plates are attached, the blaster will look like this:



It's getting close to completion. Neat!

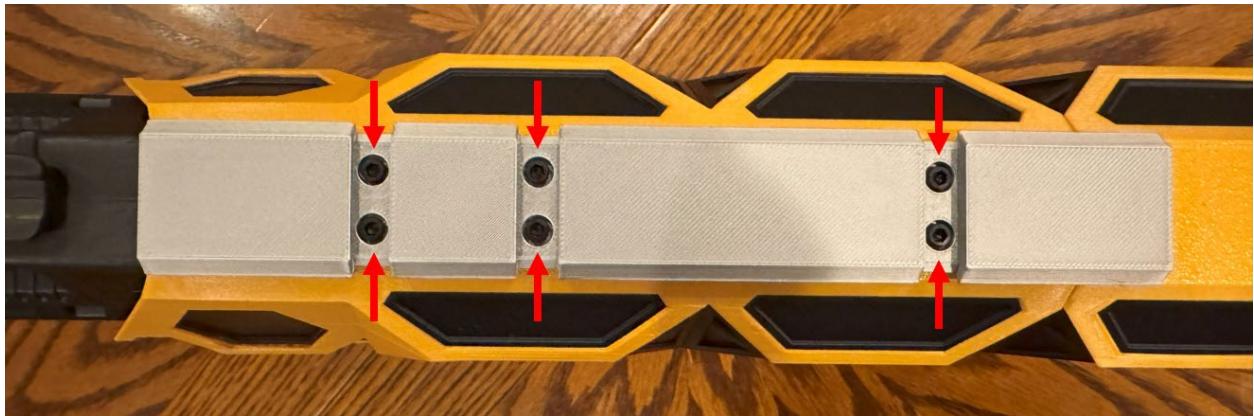
Attach the Handgrip

Place the handgrip on the bottom of the blaster with the raised side towards the close end of the blaster. Attach it with 4 M3x8 self-tapping screws, placed in the holes indicated by the red arrows:



Attach the Sight Rail

Place the sight rail on top of the back cover plate such that all the screw holes align. This will require 6 M3x8 self-tapping screws to attach, placed in the holes indicated by the red arrows:



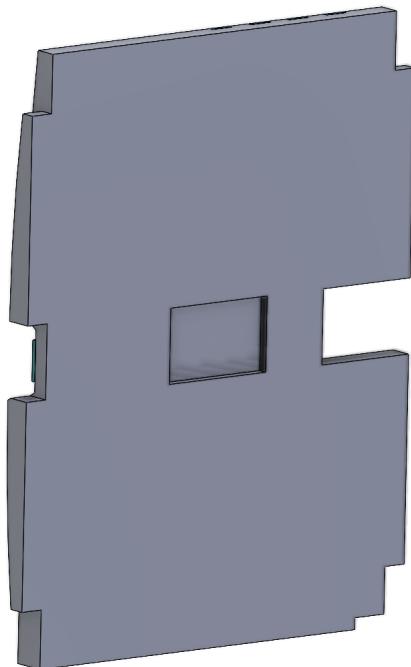
After the screws, the blaster should look like this:



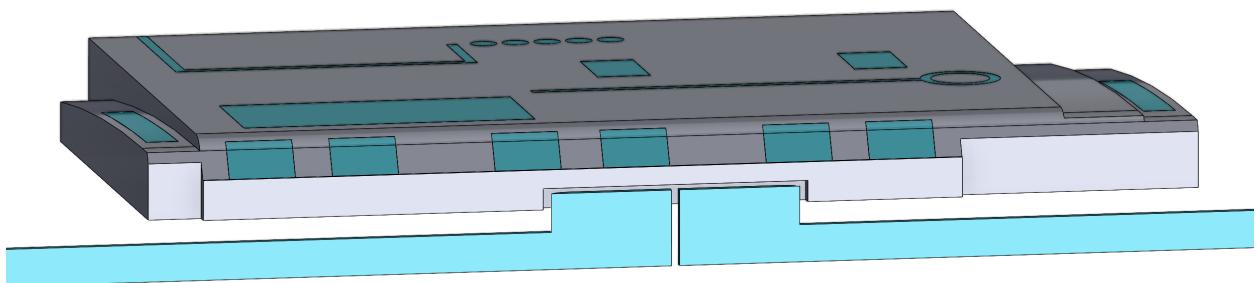
Attach the LED Segments and Side Screens on the Left Side

This step may require some adhesive to attach the side screens depending on how the support material come off the barrel segments. Ironically, some leftover support interface material is nice to ensure a snug press fit of the side screens.

All of the side screens are identical. On the back of each side screen, there is a recessed pocket.



This pocket is designed to hold the two sides of the LED segments together and down on the surface of the barrel.



Far LED Segment

On both sides of the far barrel segment, there are pockets that the far LED segment slots into. Take the side without the nub and insert it into the slot.



After inserting, ensure that the nub is facing externally and the LED segment sits flush with the side of the blaster.



Middle LED Segment

Until the side LEDs are attached, the middle LED segment will be free floating. Roughly align it in place such that the far and middle LED segments touch.



Far Side Screen

Lock the two LED segments in place with a side screen. Proper orientation of the side screen is as shown in the image, although feel free to orient it flipped if you prefer. If there is not a snug press fit, apply a little adhesive on the back of the side screen to adhere it to the barrel.



Close LED Segment, Left

The left-sided close LED segment should have its close tip pointing downwards as shown in the image. Similar to the middle LED segment, roughly place the close LED segment butting against the close end of the middle LED segment.



Close Side Screen

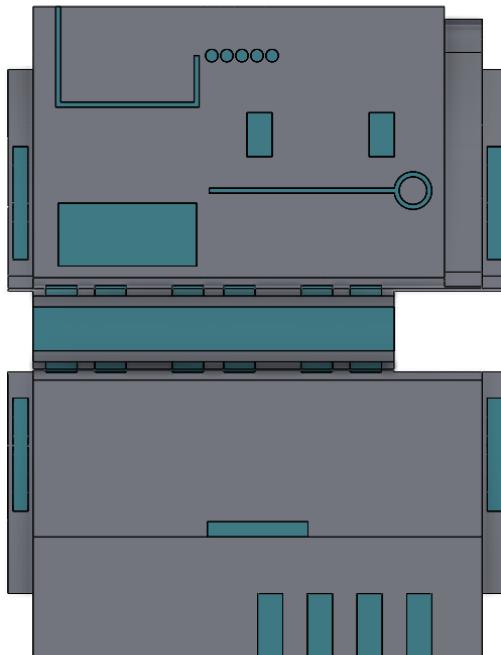
Lock the two LED segments in place with a side screen. Proper orientation of the side screen is as shown in the image, although feel free to orient it flipped if you prefer. If there is not a snug press fit, apply a little adhesive on the back of the side screen to adhere it to the barrel.



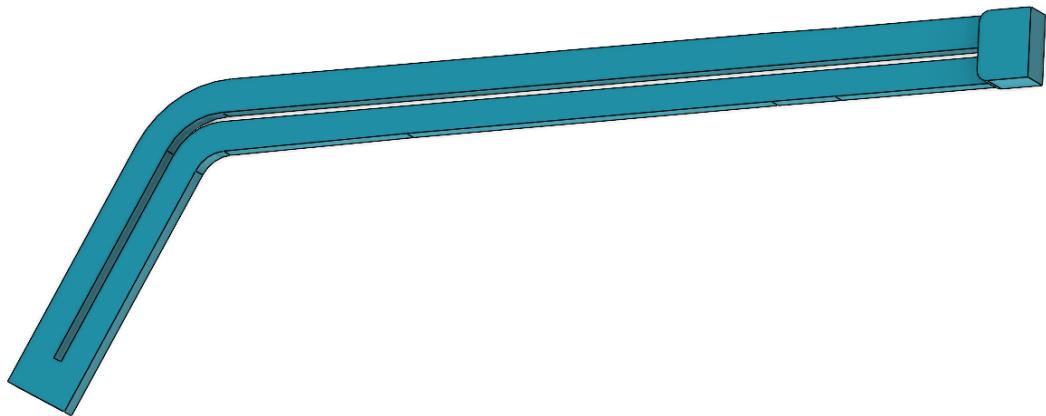
If all the steps are followed properly, the side screens should not fall off when the blaster is waved around and the LED segments should be held firmly.

Attach the LED Segments and Side Screens on the Right Side

Follow the same steps as above, but mirror the components on the left side. Side screens should be oriented in the same direction to match the game, but orient them however you prefer 😊.

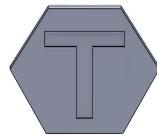


Additionally, the right-sided close LED segment should look like this:



Attach the Top and Bottom Hexes

From the outside, the top and bottom hexes look quite similar. However, they are different and denoted with a letter on the back (“T” for top, “B” for bottom). They will not fit properly if mixed up.



Bottom Hexes

Starting with the left side, press the bottom hex into the bottom hexagonal pocket on the close barrel segment. The “B” should be oriented in the proper direction, with the blue accents oriented like the image below. You might need to wiggle around the cover plates to press them in properly. It should be a light press in, but if it is not, use some adhesive to adhere the hex to the surface.



Mirror this process on the right side.

Top Hexes

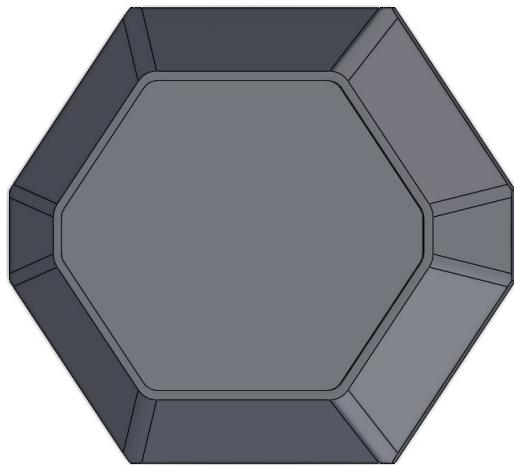
Starting with the left side, press the top hex into the top hexagonal pocket on the close barrel segment. The “T” should be oriented in the proper direction, with the blue accents oriented like the image below. You might need to wiggle around the cover plates to press them in properly. It should be a light press in, but if it is not, use some adhesive to adhere the hex to the surface.



Mirror this process on the right side.

Attach the Middle Hexes

Starting with the left side, place two middle hexes in the two middle hex pockets. Orientation of the middle hexes do not matter as long as it fits into its pocket. Some adhesive may be required if it does not fit in properly. Also, the far and middle LED segments may need to be pulled up a bit to fix the hexes into the pocket.



Attach the Accent Triangles

Press the accent triangles onto both sides of the far barrel. Depending on the print settings, you may require some adhesive.



After this, the entire barrel side of the blaster should be complete!

Stock

Don't worry, you're very close to complete! The stock side is much easier to assemble than the barrel side.

Attach the Bottom Stocks

Make sure to remove the support material very cleanly off the bottom stock pieces. This will likely require some sort of spudger to disconnect the support interface from the part.



If nicely removed, both halves of the bottom stock should look like this. Left bottom stock is on the right side of the image, and vice versa.



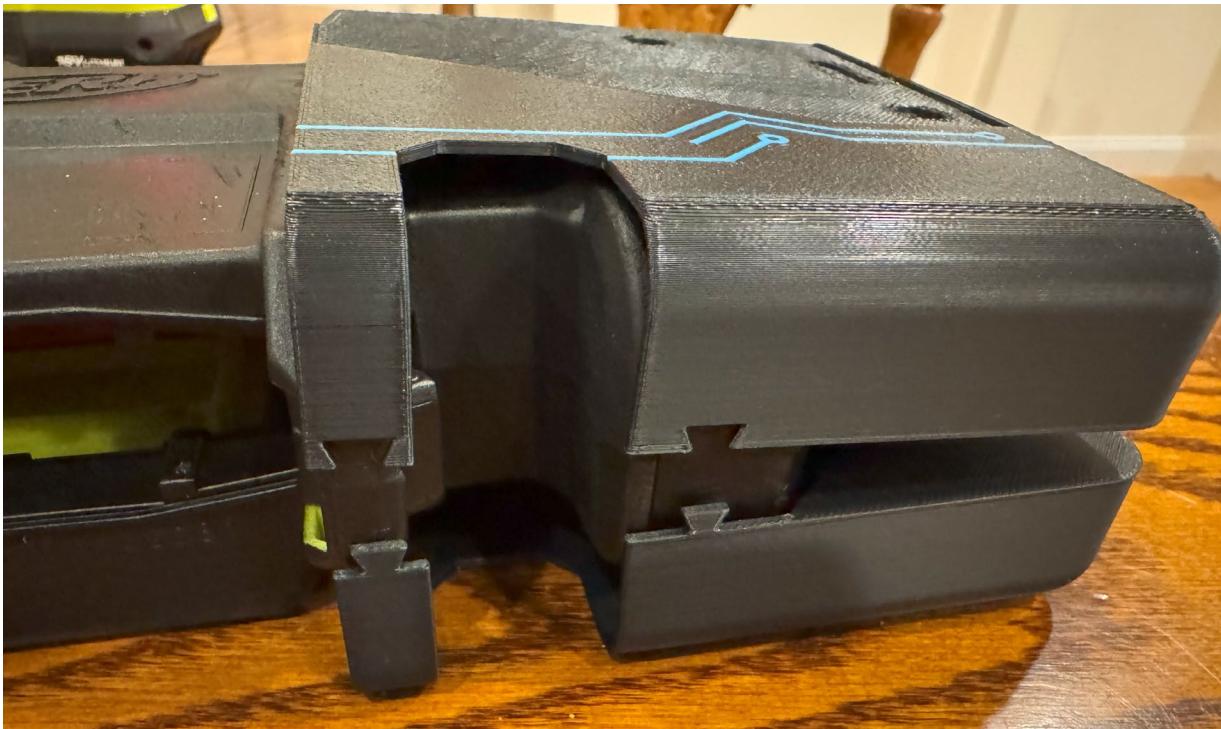
Orient the blaster with the left side facing up. Then, lift up the blaster and place the right half of the bottom stock underneath the blaster as shown.



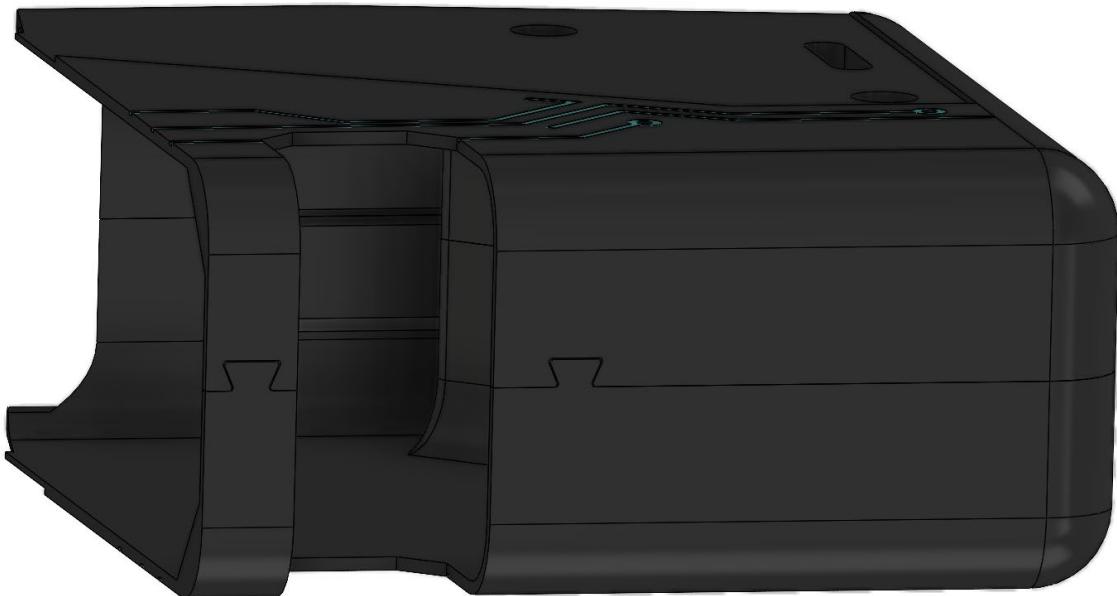
Place the left bottom stock over the blaster, aligning the two bottom halves.



On the bottom side, there should be two dovetail joints. Bring both halves towards the middle and flex the prints until the dovetails join with each other.



When successfully joined, they should look like the image below and be roughly held together.

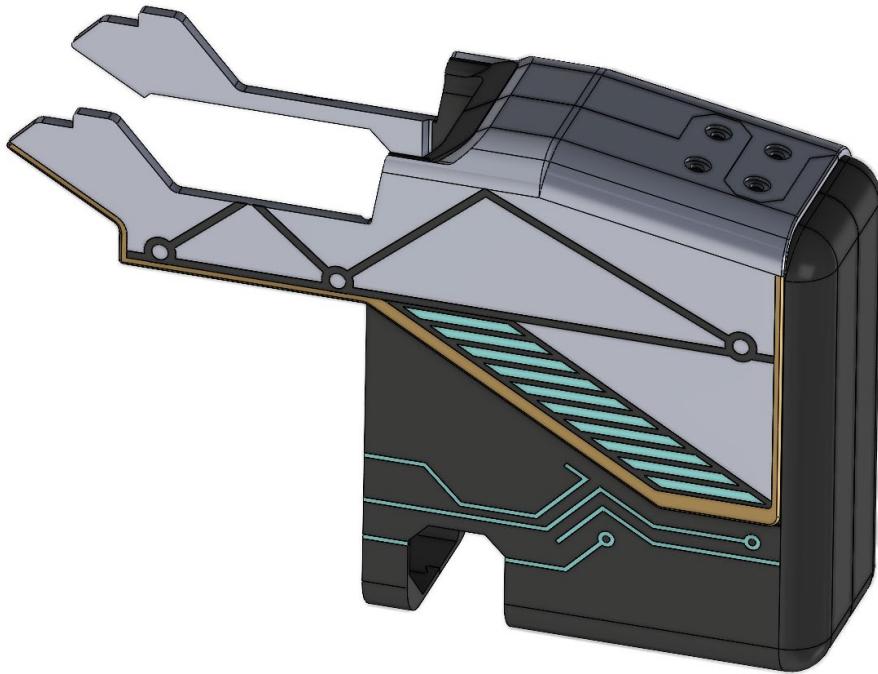


On the left bottom stock, there should be two holes. In each of these holes, place an M3x8 self-tapping screw and screw both halves together.

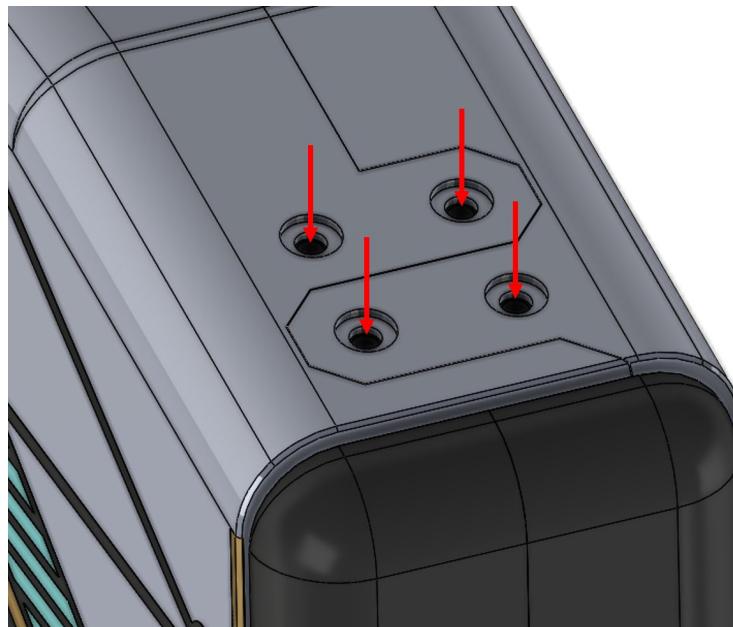


Attach the Top Stocks

Place both stocks so that they lock in with their side of the blaster. It should look like the image below:



Then, screw in 4 M3x8 self-tapping screws to lock the top stocks in place. Their locations are shown by the red arrows below:



Congrats!

You're finished with the assembly!



Enjoy your newly finished Flatline Reactive blaster!

If any part of this build made you happy or you feel generous, feel free to boost this model or share it with friends. I would greatly appreciate it 😊