

Duplex Designs' 3D Model of the Major's Polic Bike SMG

Introduction

Major Mira Killian / Motoko Kusanagi's used this weapon when she fought against Cutter who had deployed a spider-tank to kill her and Kuze in the 2017 live action movie Ghost In The Shell.

OK, we are a little late to the party with this model as the movie came out in 2017, but we believe the weapon is iconic enough to warrant its creation here in 2026.

Not a lot of clear on-screen shots of this weapon but there are some photos of the hero prop and rubber stunt models available online.

Why This Model Was Created

When we wanted to build a bike SMG for our own collection, we were disappointed in what was available either for free or for sale. Most models were nowhere near the correct size and mostly lacked detail, and we like our models to be screen accurate and consist of many parts.

So, we started to design a new weapon based on the available screen shots and stunt weapon photos and used an IWI Tavor X95 as the starting point to ensure that our finished model was as close to that used (or at least envisioned) in the movie.

Why Is This Model Better Than Other Available Models

The Duplex Designs model is based on actual IWI Tavor X95 dimensions so is very well sized and contains a lot of detail not seen in other models.

Project Skill Level Required

There are a lot of parts (Intentionally) but overall a medium skill level build. Designed for FDM printing a good fit can be obtained with a 0.4mm nozzle printing at 0.12mm layer height.

Quite a few hex head machine screws are used for the build, see parts list in the assembly instructions, but the majority of the weapon is glued together using the supplied pegs.

The only parts that may present a problem are the front and rear lenses for the optical sights as these should be clear or orange tinted clear. Perhaps resin would be a good choice for these parts.

Build Material Choices

FDM Printer

We have had good results with at 0.12mm layer height using a 0.4mm nozzle using PLA and the parts fit is excellent. It is recommended that FDM printing is used for all parts apart from lenses and some small parts.

Resin Printer

Necessary for the transparent parts (Namely the optical sight lenses) as FDM simply does not cut it. Also great for all the small parts.

Hardware Required

The model requires a set of hardware to complete. Some are for structural integrity, and some are cosmetic only. There is also a small R-clip that can be fashioned from 0.6-0.8mm wire.

All screws are hex head black oxide finished.

Hardware List

- M2.5 x 8mm Cap Head Screw



X4

- M3 x 8mm Cap Head Screw



X2

- M3 x 10mm Cap Head Screw



X4

- M3 x 20mm Cap Head Screw



X4

- M4 x 6mm Countersunk Screw



X2

- M4 x 8mm Countersunk Screw



X4

- M4 x 10mm Machine Screw



X2

- M4 x 12mm Countersunk Screw



X2

- M4 x 20mm Machine Screw



X4

- M4 x 25mm Machine Screw



X2

- M5 x 8mm Cap Head Screw



X2

- M5 x 12mm Cap Head Screw



X2

- M5 x 10mm Machine Screw



X1

- M5 x 25mm Cap Head Screw



X1

- R-Clip 12mm final length, 0.6 – 1.0mm diameter wire (Make by hand)



X1

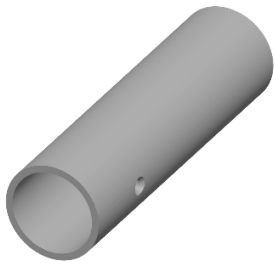
- Trigger Spring 6mm x 15mm optional spring to fit behind Trigger.



X1

STL Parts List

Following is a list of STL model parts along with notes.

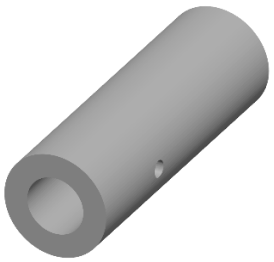


Barrel Outer

Be careful to align holes on assembly.

Print X 1

Black

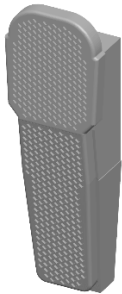


Barrel Inner

Be careful to align holes on assembly.

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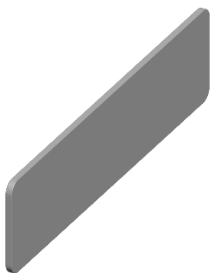


Butt Plate

Glued in place.

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Black

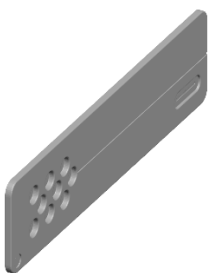


Butt Side Panel Left

Glued in place.

Print X 1

Black

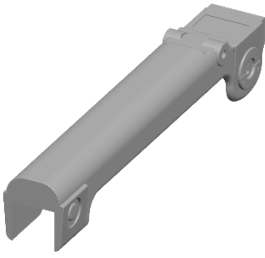


Butt Side Panel Right

Glued in place.

Print X 1

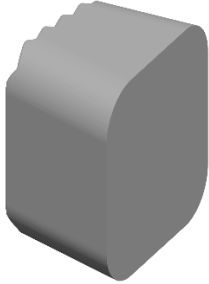
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Butt Upper
Glued in place.

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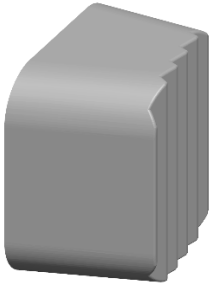
Black



Button Left
Glued in place.

Print X 1

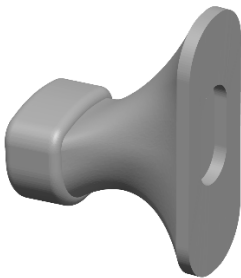
Black



Button Right
Glued in place.

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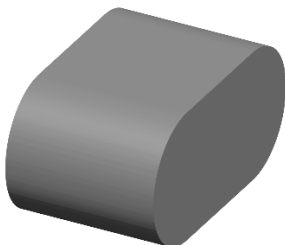
Black



Cocking Lever
Use peg to glue to receiver.

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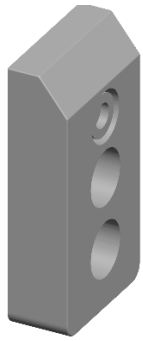
Black



Cocking Lever Peg
Use cocking lever to glue to receiver.

Print X 1

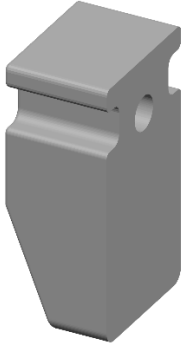
Black



Ejector Left
Screwed to Receiver Lower Rear.

Print X 1

Black



Ejector Right
Screwed to Receiver Lower Rear.

Print X 1

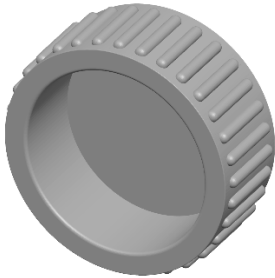
Black



Eye Lens
Glued to Eye Optic.

Print X 1

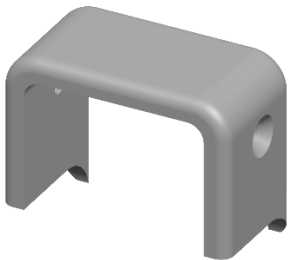
Clear / Clear Orange



Eye Optic
Glued to Sight Small Inner.

Print X 1

Black



Front Band
Screwed to Front Inner Frames.

Print X 1

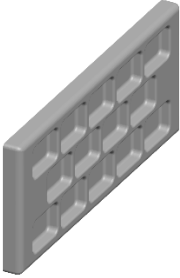
Black



Front Barrel Insert
Glued to Front Inner Frames.

Print X 1

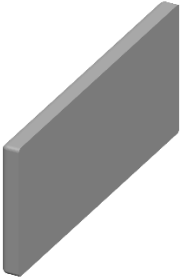
Black



Front Barrel Side Detail Left
Glued to Front Inner Frame Left. (Hides assembly screw)

Print X 1

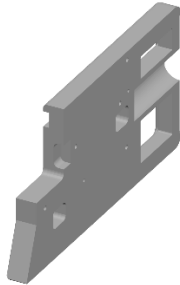
Black



Front Barrel Side Detail Right
Glued to Front Inner Frame Right. (Hides assembly screw)

Print X 1

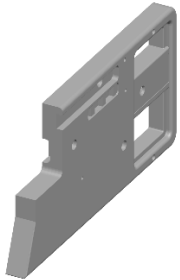
Black



Front Inner Frame Left

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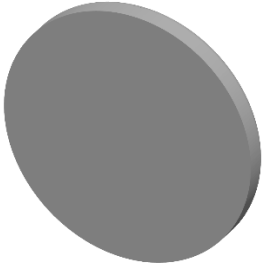
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Front Inner Frame Right

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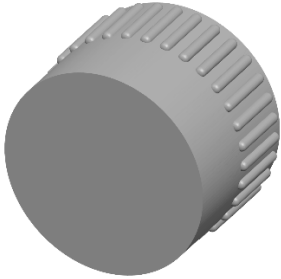
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Front Lens
Glued to Front Optic.

Print X 1

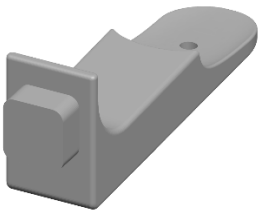
Clear / Clear Orange



Front Optic
Glued to Sight Large Inner.

Print X 1

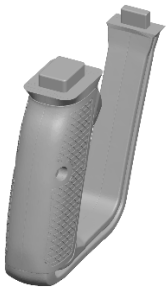
Black



Grip Mag Join
Glues to Rear Butt Lower parts and screws into Grip.

Print X 1

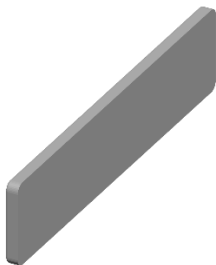
Black



Grip
Glues to Receiver Lower Front and screws onto Grip Mag Join.

Print X 1

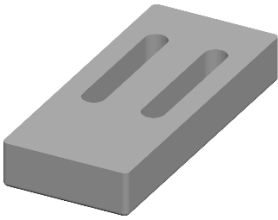
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Left Flat Feature
Glues to left side of Receiver Lower Rear. Covers unused shell ejection port.

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Black

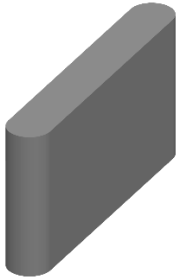


Mag Base

Glues to Rear Butt Lower parts using Mag Peg 1 & 2.

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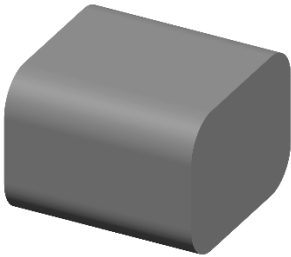


Mag Peg (1 & 2)

Used to glue together Mag Base and Rear Butt Lower parts.

Print X 2

Black

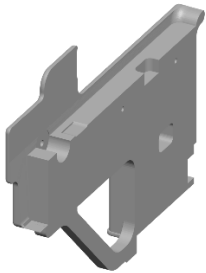


Peg Joint

Used to glue various parts together.

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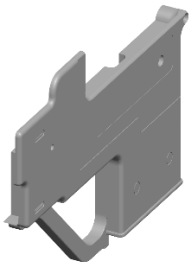
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Rear Butt Lower Left

Print X 1

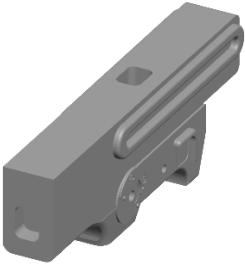
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Rear Butt Lower Right

Print X 1

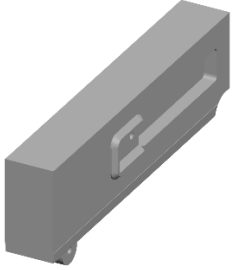
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Receiver lower Front

Print X 1

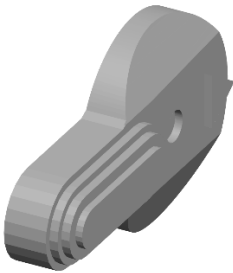
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Receiver Lower Rear

Print X 1

Black

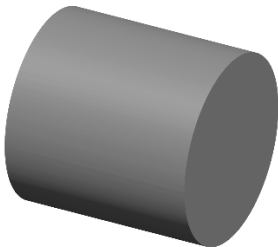


Selector Left

Use Selector Lever Peg Left to glue to Receiver Lower Front.

Print X 1

Black



Selector Lever Peg Left

Use Selector Left to glue to Receiver Lower Front.

Print X 1

Black

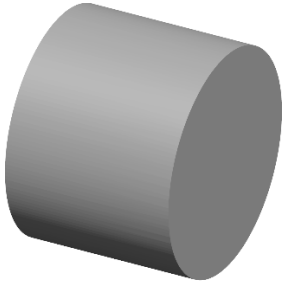


Selector Lever Right

Use Selector Lever Peg Right to glue to Receiver Lower Front.

Print X 1

Black

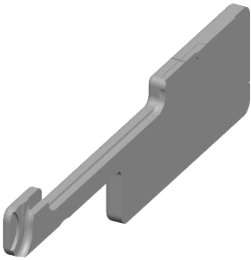


Selector Lever Peg Right

Use Selector Lever Right to glue to Receiver Lower Front.

Print X 1

Black

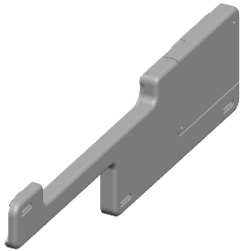


Side Cheek Left

Secured to left side of receiver using screws and glue.

Print X 1

Black

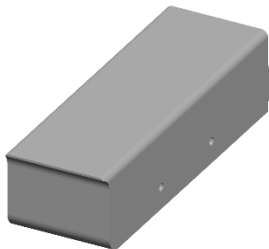


Side Cheek Right

Secured to right side of receiver using screws and glue.

Print X 1

Black

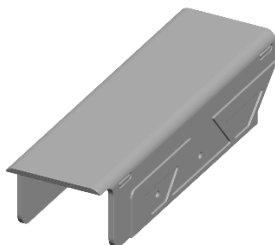


Sight Large Inner

Glues to top of Top Frame.

Print X 1

Black

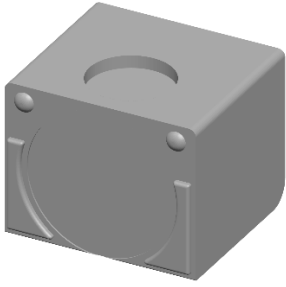


Sight Large Outer

Secures to Sight Large Inner using screws.

Print X 1

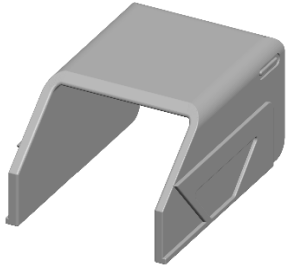
Black



Sight Small Inner
Glues to Sight Mount.

Print X 8

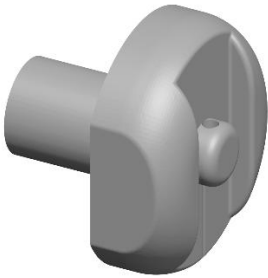
Black



Sight Small Outer
Secures to Sight Small Inner using screws.

Print X 2

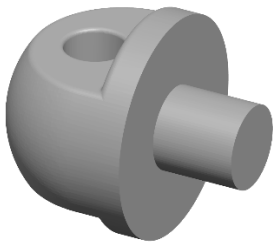
Black



Swivel Back
Glues to right side of Butt Upper. Also contains R-Clip wire form.

Print X 1

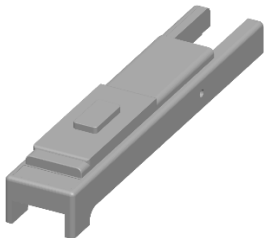
Black



Swivel Mount
Glues to left side of Butt Upper.

Print X 1

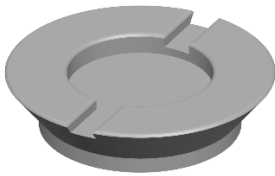
Black



Top Frame
Glues to top of assembled receiver parts. Slides into Front Inner Frame parts.

Print X 1

Black



Top Screw Feature
Glues to top of Butt Upper.

Print X 1

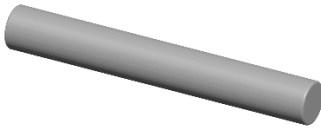
Black



Trigger
Fits inside Rear Butt Lower parts and is fixed using Trigger Pin. A 6 x 15mm
sprint can be fitted to allow Trigger to move.

Print X 1

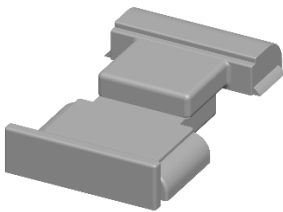
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Trigger Pin
Used to fix Trigger to Rear Butt Lower parts.

Print X 1

Black



Sight Mount
Glued to Sight Small Inner to mount it to Butt Upper and Top Frame.

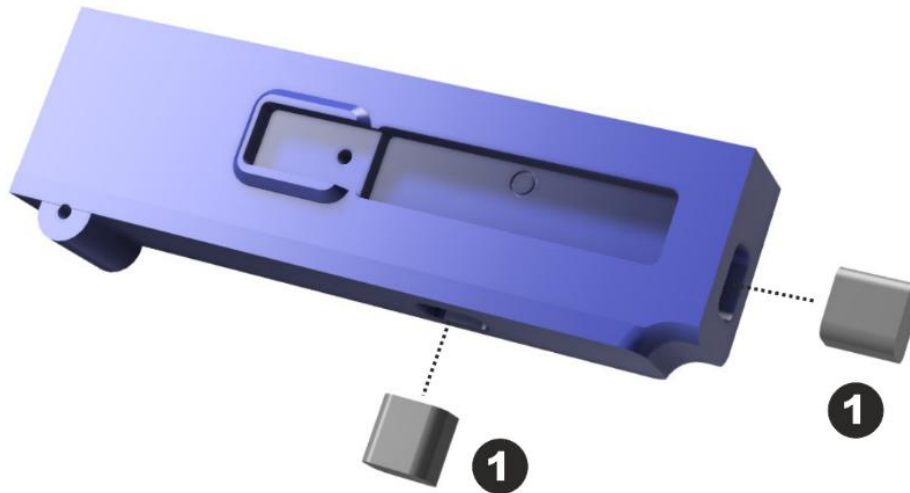
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Assembly Sequence

You will probably want to prepare and paint all parts before assembly.

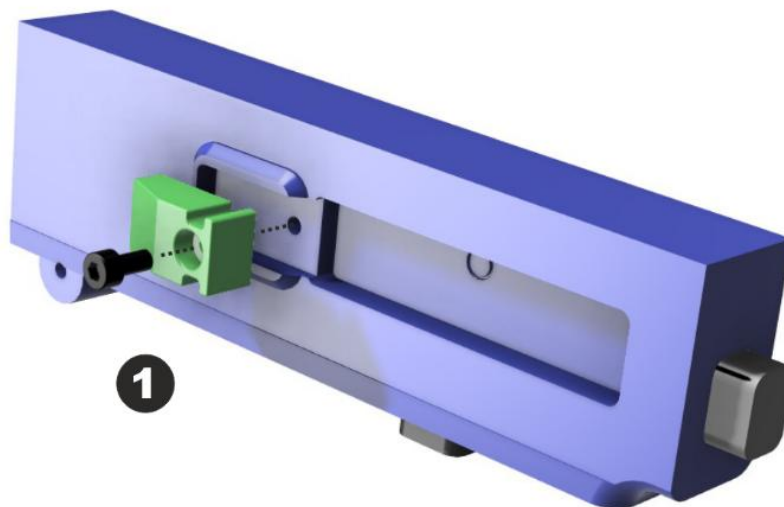
Holes that accept screws should be tapped appropriately but you may want to enlarge holes where screws pass through a part before engaging with the target tapped hole.

Lower Receiver Rear 1



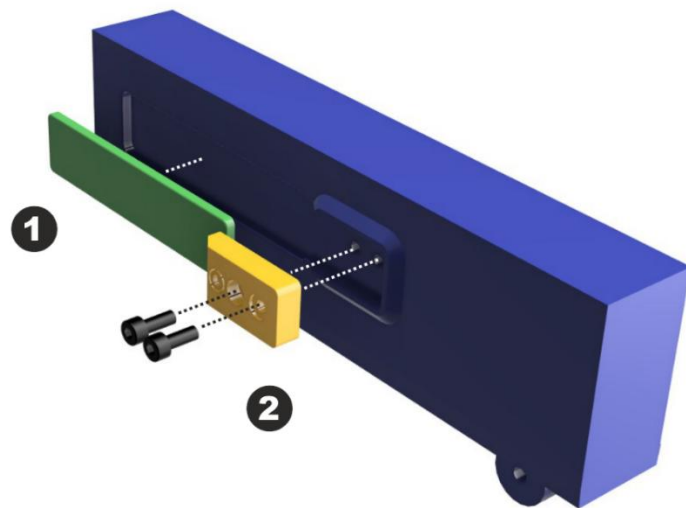
1. Glue 2 X Peg Joint into Receiver Lower Rear.

Lower Receiver Rear 2



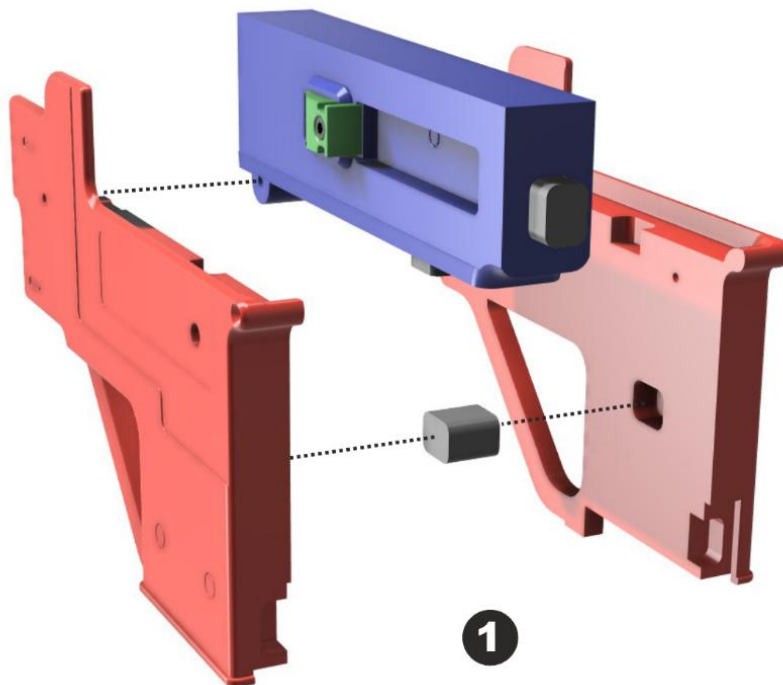
1. Attach **Ejector R** onto **Receiver Lower Rear** using M5 X 10mm machine head screw.

Lower Receiver Rear 3



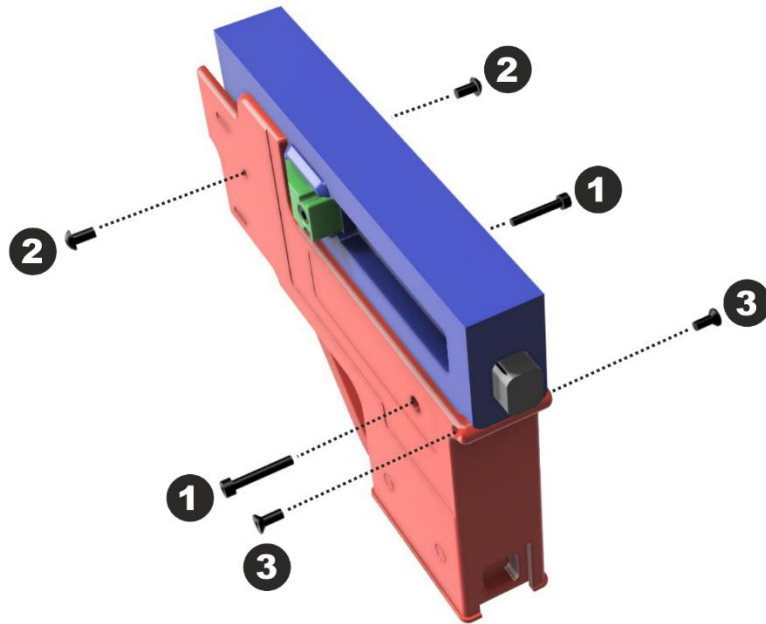
1. Glue Left Flat Feature onto Receiver Lower Rear.
2. Attach Ejector L onto Receiver Lower Rear using 2 X M4 X 10mm machine head screws.

Lower Receiver Rear 4



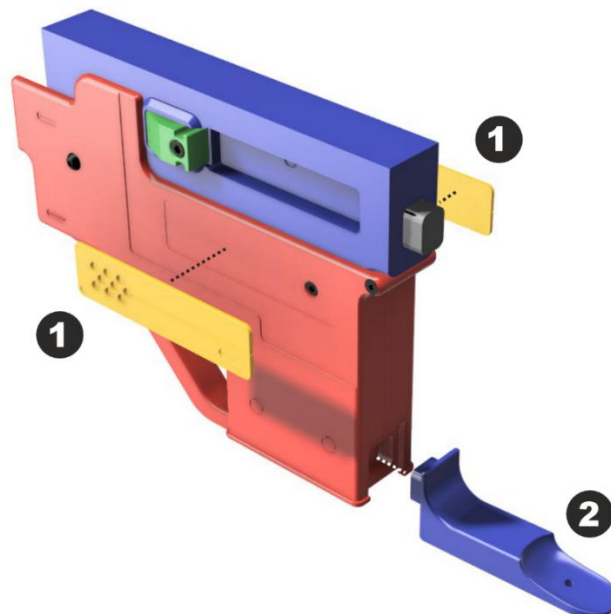
1. Attach both sides of Rear Butt Lower to Receiver Lower Rear using a Peg Joint with glue. **Do not use superglue as you do not want an immediate bond because there are more parts to assemble.**

Lower Receiver Rear 5



1. Use 2 X M4 x 25mm machine head screws that will hold Rear Butt Lower parts together.
2. Use 2 X M5 x 12mm cap head screws that will hold Rear Butt Lower parts together.
3. Use 2 X M3 x 8mm countersunk screws for cosmetic purposes.

Receiver Rear 6



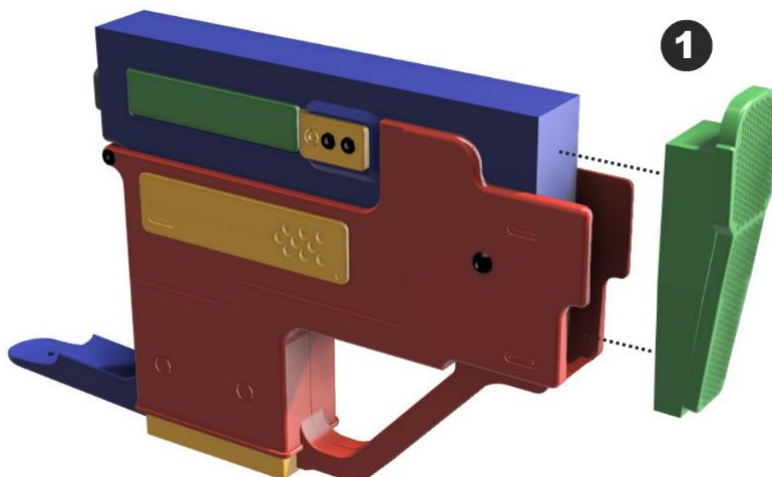
1. Glue Butt Side Panel L and Butt Side Panel R to Rear Butt Lower parts. These should hide the assembly screws.
2. Glue Grip Mag Join to Rear Lower Butt assembly.

Lower Receiver Rear 7



1. Glue Mag Base to bottom of Rear Butt Lower assembly using Mag Peg 1 and 2.

Lower Receiver Rear 8



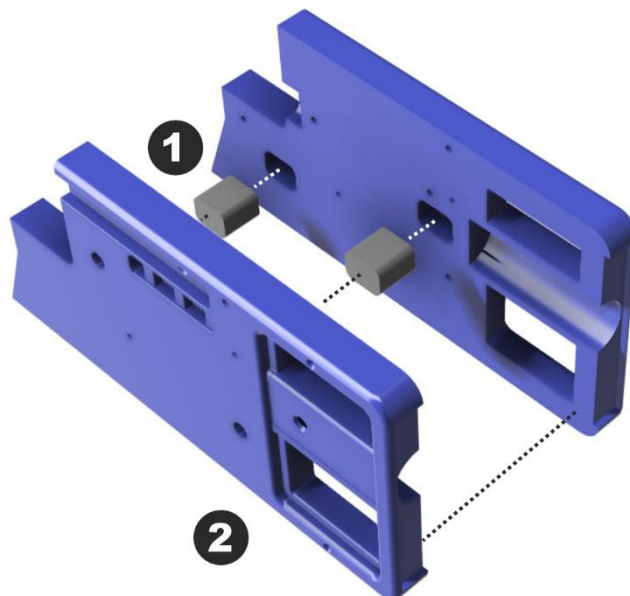
1. Glue Butt Plate to rear of Rear Butt Lower assembly.

Lower Receiver Rear Complete



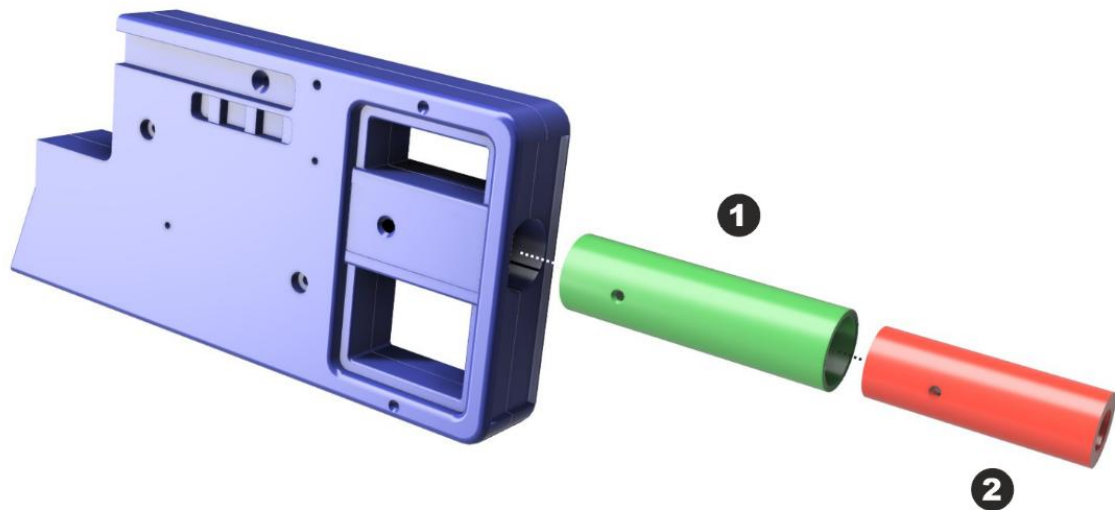
1. This completes the Rear Butt Lower assembly.

Front Inner Frame Assembly 1



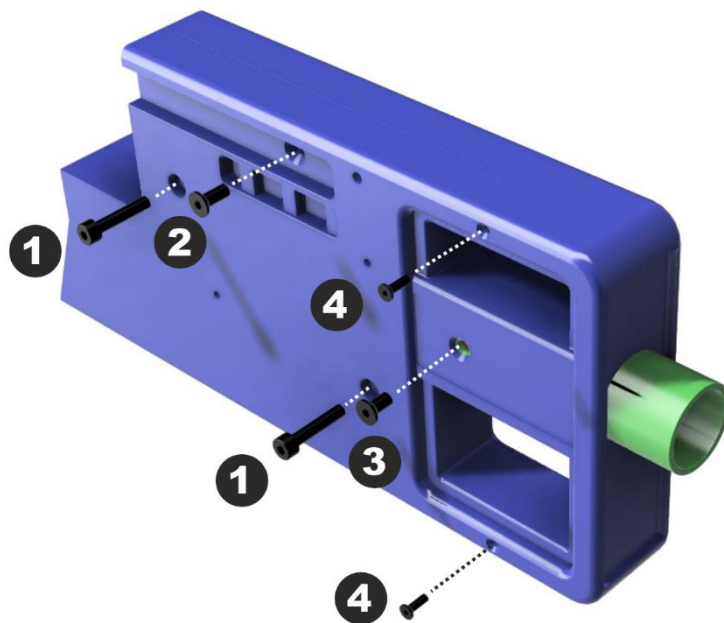
1. Glue 2 X Peg Point parts to Front Inner Frame L.
2. Then glue Front Inner Frame R to the left side.
Do not use superglue as you do not want an immediate bond because there are more parts to assemble.

Front Inner Frame Assembly 2



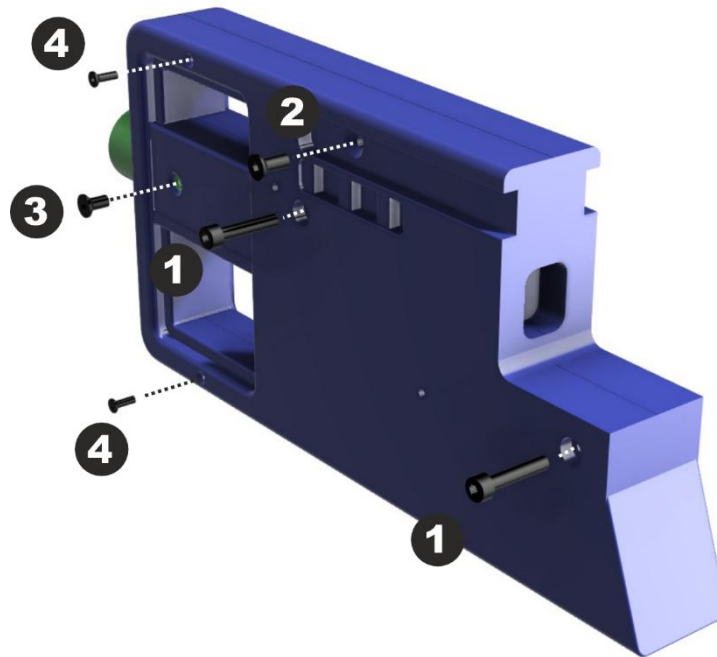
1. Slide Barrel Outer into Front Inner Frame Assembly ensuring that the holes align.
2. Slide Barrel Inner inside Barrel Outer ensuring that the holes align.

Front Inner Frame Assembly 3



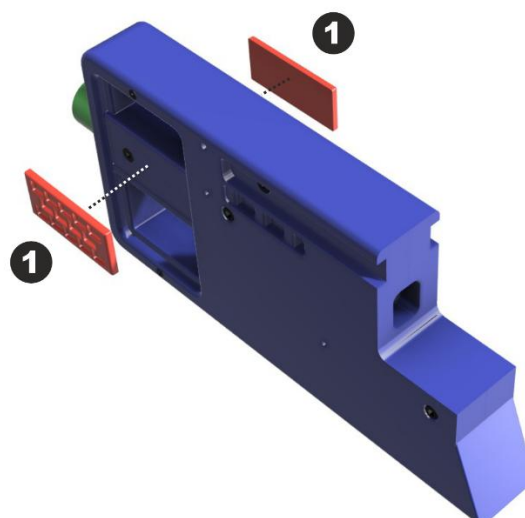
1. Use 2 X M4 x 20mm machine head screws to hold Front Frame Inner parts together.
2. Fit M4 x 8mm countersunk screw. This is cosmetic only.
3. Fit M4 x 6mm countersunk screw to hold barrels. Longer screws can be used but will be visible down the barrel.
4. Fit 2 X M2.5 x 8mm countersunk screws. These are cosmetic only.

Front Inner Frame Assembly 4



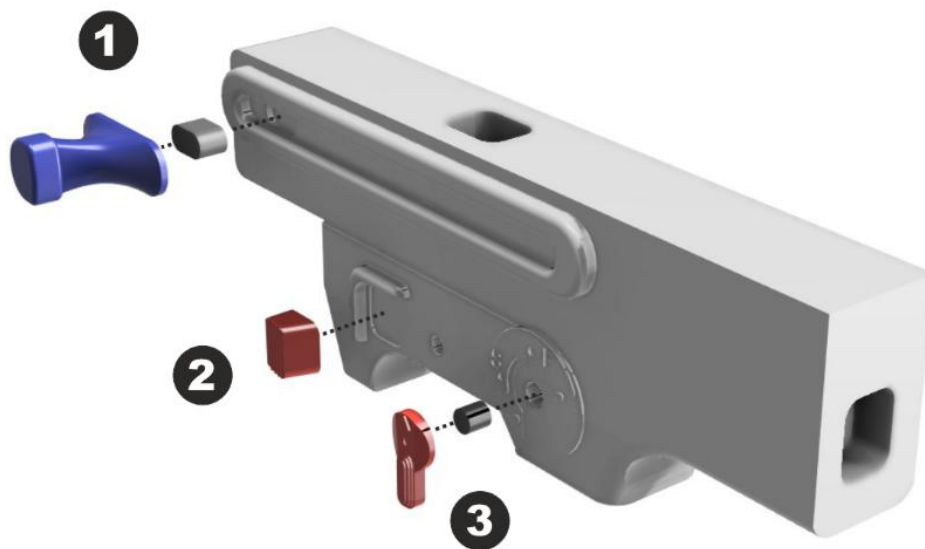
1. Use 2 X M4 x 20mm machine head screws to hold Front Frame Inner parts together.
2. Fit M4 x 8mm countersunk screw. This is cosmetic only.
3. Fit M4 x 6mm countersunk screw to hold barrels. Longer screws can be used but will be visible down the barrel.
4. Fit 2 X M2.5 x 8mm countersunk screws. These are cosmetic only.

Front Inner Frame Assembly 5



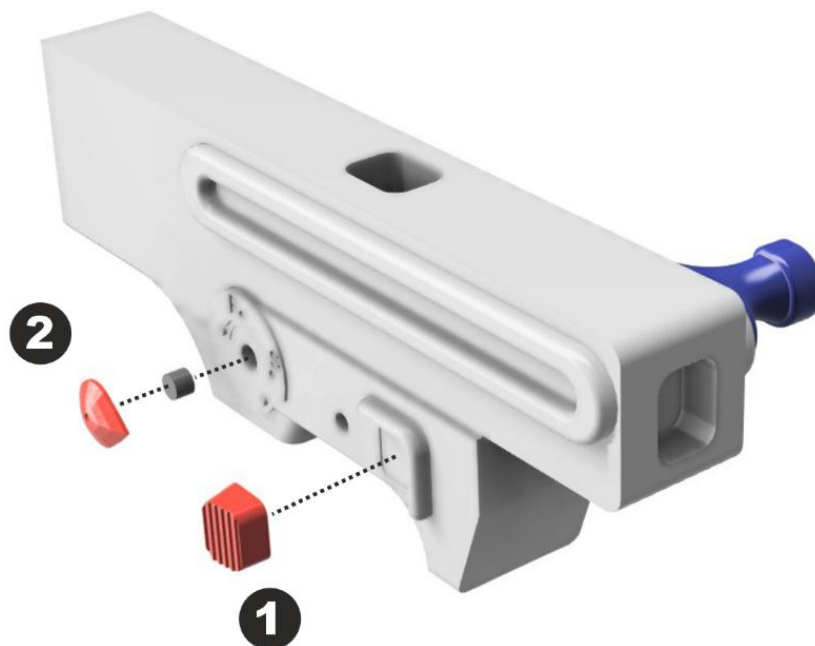
1. Attach Front Barrel Side Detail L & R parts to Front Inner Frame parts with glue. These will hide the assembly screws.

Receiver Lower Front Assembly 1



1. Use Cocking Lever Peg to glue Cocking Lever to Receiver Lower Front.
2. Glue Button L to Receiver Lower Front.
3. Use Selector Lever Peg L to glue Selector Left to Receiver Lower Front.

Receiver Lower Front Assembly 2



1. Glue Button R to Receiver Lower Front.
2. Use Selector Lever Peg R to glue Selector Lever Right to Receiver Lower Front.

Receiver Lower Front Assembly 3



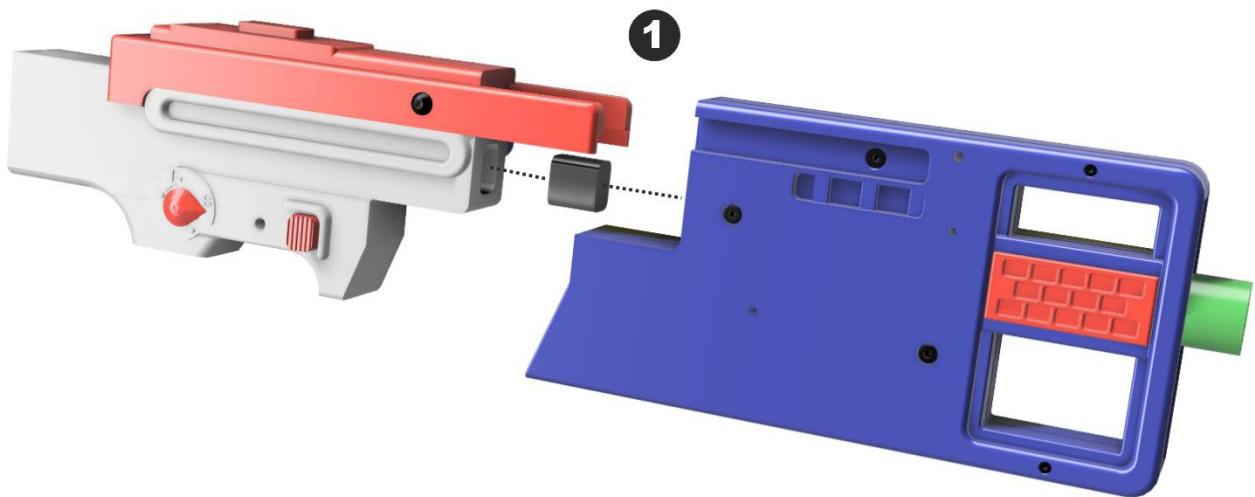
1. Glue Top Frame to Receiver lower Front using a Peg Joint.

Receiver Lower Front Assembly 4



1. Fit 2 X M5 x 8mm cap head screws to Top Frame. These are cosmetic only.

Receiver Lower Front Assembly + Front Inner Frame Assembly



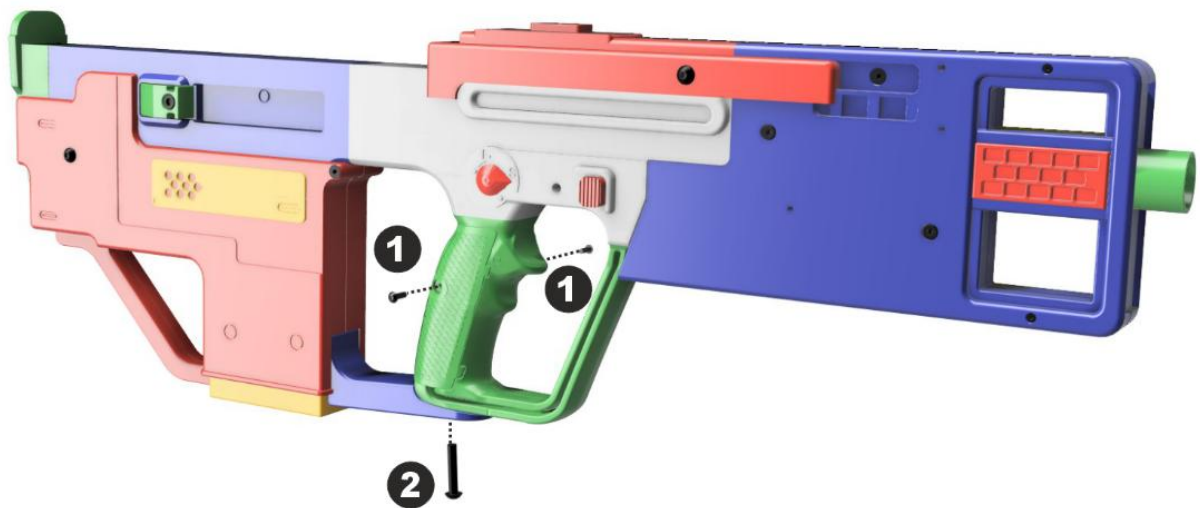
1. Use a Peg Joint to glue Receiver Lower Front Assembly to Front Inner Frame Assembly.

Complete Receiver Assembly



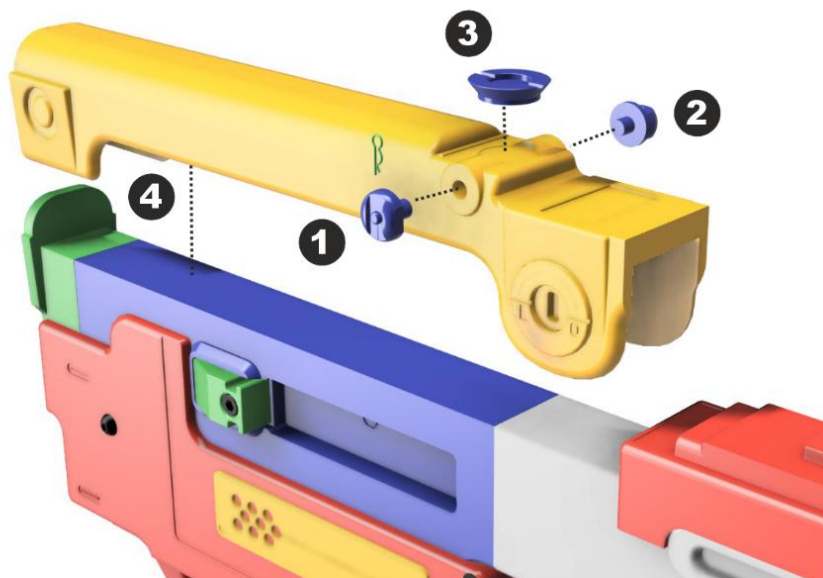
1. Glue Grip to assembly from previous step.
2. Use a Peg Joint to glue the Rear Butt Lower assembly to the rest of the assembly.

Receiver Final Assembly



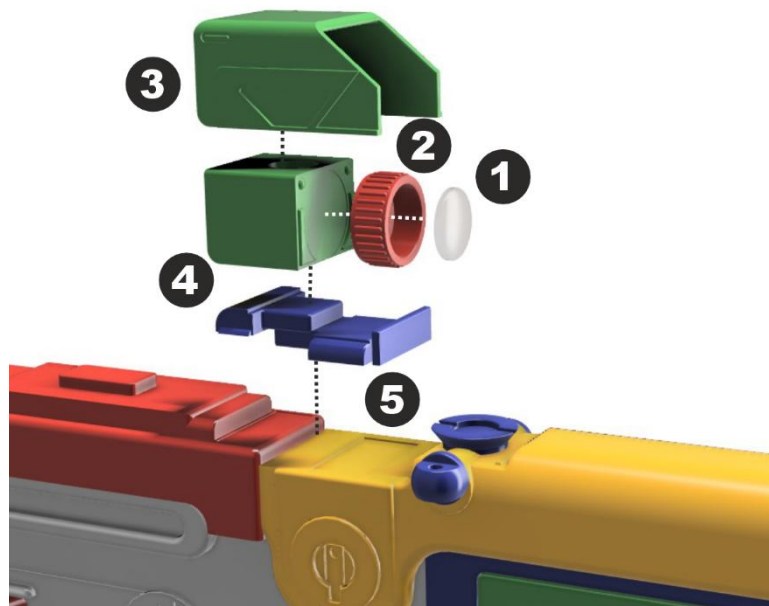
1. Fit 2 X M3 x 8mm cap head screws to Grip. These are cosmetic only.
2. Fit M5 X 25mm cap head screw to connect Grip Mag Join to Grip.

Rear Butt Assembly



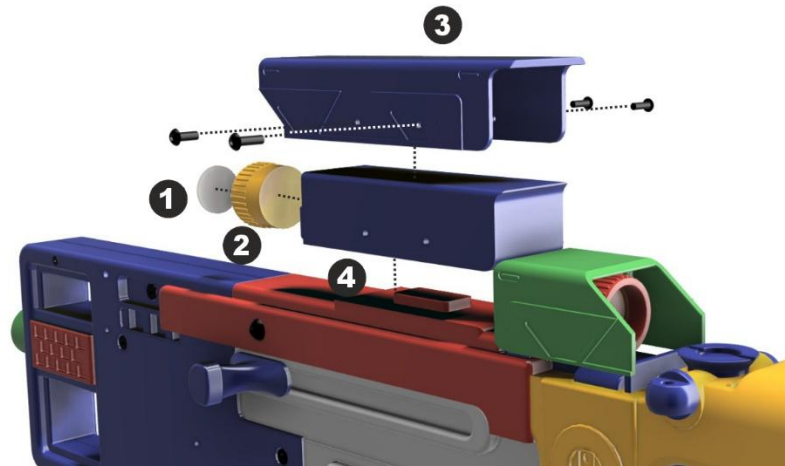
1. Glue Swivel Back to right side of Butt Upper and fit the R-Clip if you have made one.
2. Glue Swivel Mount to left side of Butt Upper.
3. Glue Top Screw Feature to the top of Butt Upper.
4. Glue Butt Upper assembly to the Rear Butt Lower assembly.

Sight Small Assembly



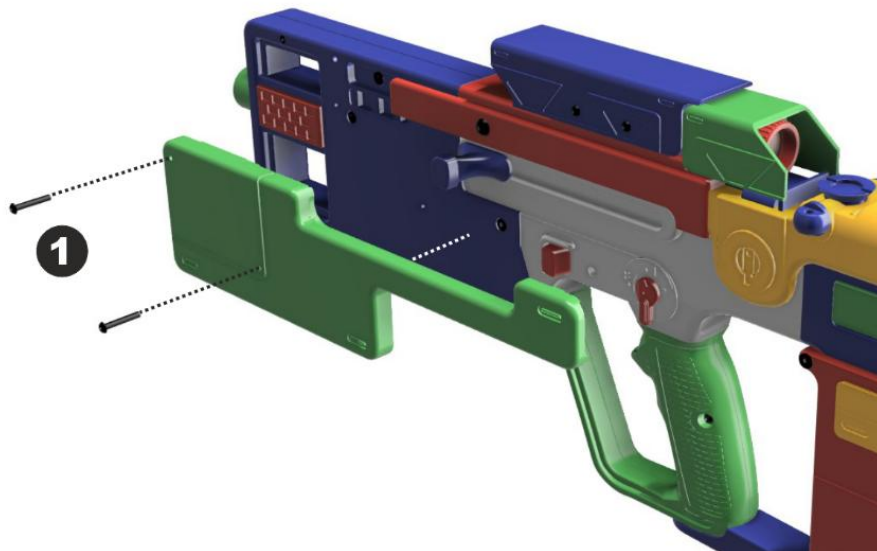
1. Glue Eye Lens to Eye Optic.
2. Glue Eye Optic to Sight Small Inner.
3. Glue Sight Small Outer to the top of Sight Small Inner.
4. Glue Sight Mount to bottom of Sight Small Inner.
5. Glue Sight Mount (Including entire small sight assembly) to the top of Butt Upper and Top Frame.

Sight Large Assembly



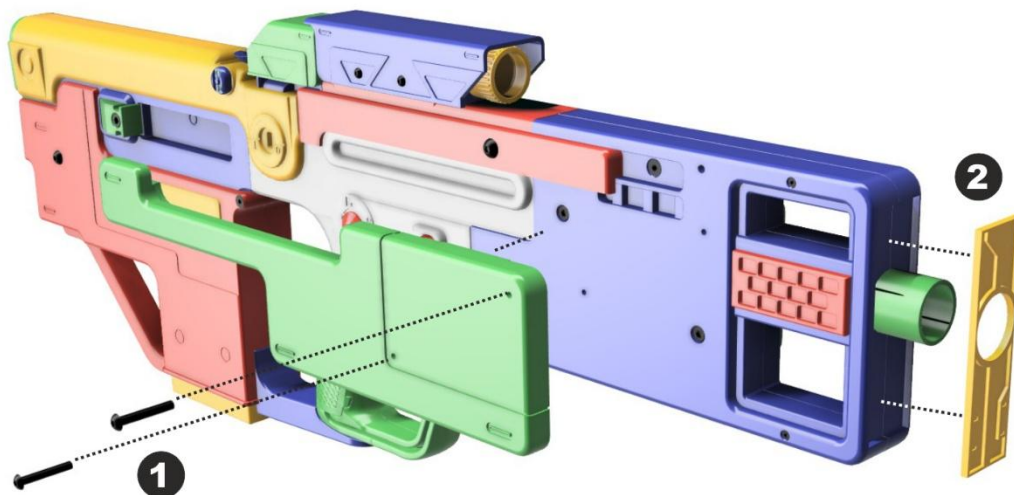
1. Glue Front Lens to Front Optic.
2. Glue Front Optic to Sight Large Inner.
3. Attach Sight Large Outer to the top of Sight Large Inner using 4 X M3 x 10mm cap head screws.
4. Glue complete large sight assembly to the top of Top Frame.

Side Cheek Assembly 1



1. Attach Side Cheek L to the left side of the weapon using 2 X M3 x 20mm cap head screws. You could also add some glue to the opposite end if it does not sit flush with everything else.

Side Cheek Assembly 2



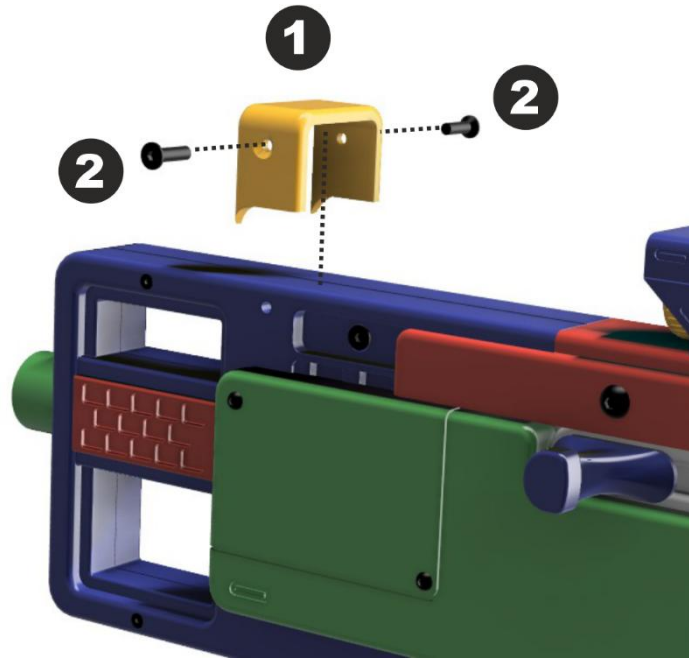
1. Attach Side Cheek R to the right side of the weapon using 2 X M3 x 20mm cap head screws. You could also add some glue to the opposite end if it does not sit flush with everything else.
2. Glue Front Barrel Insert Block to The Front Inner Frame assembly.

Trigger Assembly



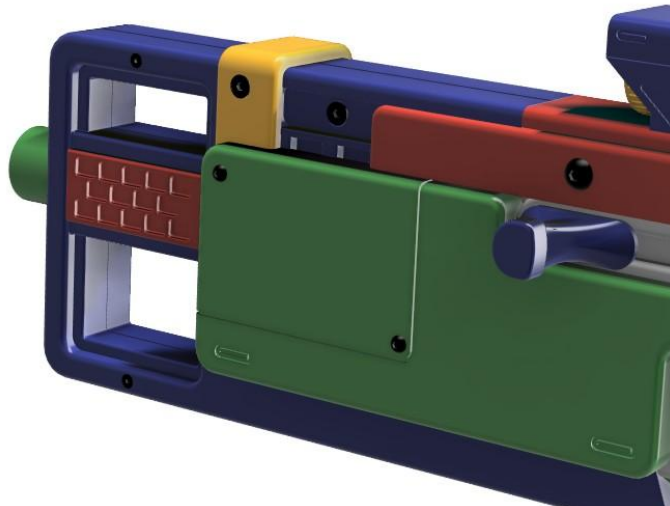
1. If you decide to use a spring, insert this into the round cavity inside the Receiver Lower Front (behind the Trigger).
2. Insert the Trigger into the Receiver Lower Front. You may need to hold back the spring with a flat tool whilst doing this.
3. Secure Trigger by sliding in the Trigger Pin.

Front Band Assembly



1. Slide the Front Band over the Front Inner Frame assembly.
2. Secure with 2 X M4 x 12mm countersunk screws.

Assembly Complete



1. You have now completed the assembly process.

Gallery

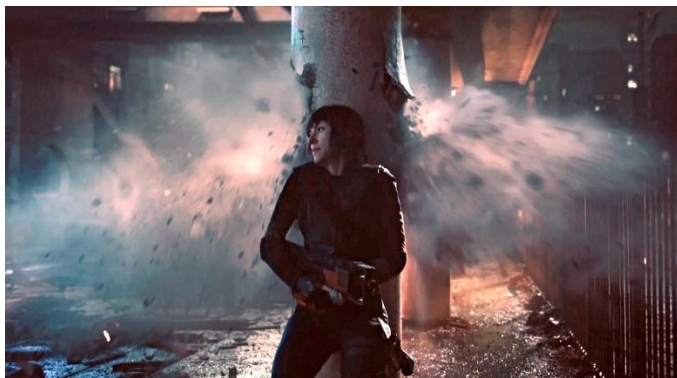
Ghost In The Shell Movie and Prop Images



Hero Prop



Rubber Stunt Prop



Movie Still 1 (Enhanced)



Movie Still 2

Duplex Designs Model Renders



Right View



Left View

Duplex Designs 3D Printed Model Images (Coming Soon)



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