PropTroniX

F-11D Blaster

Build Instructions

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1. About the F-11D Blaster

Introduced in “The Force Awakens” in 2015, the F-11D Blaster Rifle was a Blaster Rifle manufactured by Sonn-Blas Corporation.
This ranged weapon was the successor of the older E-11 Blaster Rifle used by the Galactic Empire.
It served as the standard issue weapon of First Order Stormtroopers

Rey: [Using the Force] You will remove these restraints and leave the cell with the door open.
First Order Stormtrooper: I will remove these restraints and leave the cell with the door open.
Rey: And you will drop your weapon!
First Order Stormtrooper: And I will drop my weapon

My version of the F-11D Blaster has been designed with the capability of adding Electronics for Light and Sound.
It has also been designed for ease of printing and also painting the individual parts to get the best possible finish.

All the images used in these Build Instructions are images from my design done in Fusion360. I do not consider it to be 100% screen accurate but it’s pretty close.

You can use these files to print either a Standard F-11D Blaster or the Heavy Blaster.

Standard Version

Heavy Version

2. Tools List

The following tools are what I recommended to use to build your F-11D Blaster.

2.1. 3D Model

- Eye Protection - Goggles to protect your eye's from the dust particles
- Dust Mask - For protection from breathing in the dust particles
- Sandpaper - Various grades 80 Grit, 180 Grit and Wet & Dry 600 Grit (A few sheets of each)
- Small Metal Files - Various widths and shapes
- Super Glue
- 2 Part Epoxy Glue
- Small Pair of Side Cutters
- Needle Nose Pliers
- Exacto Knife
- Filler - Bondo, wood filler, fine car filler or any other type of filler that is easy to sand can be used.
- Paint - Filler Primer, Colours of your choice

2.2. Electronics

- Multi-Meter - For testing circuits and connections (VERY IMPORTANT)
- Soldering Iron or Soldering Station
- Solder
- Solder Wick
- Wire - 28AWG or 30AWG Silicon wire recommended
- Wire Stripper
- Heat Shrink Tubing - Various Sizes
- Hot Air Gun, Lighter or Solder Station - For shrinking heat shrink tubing
- Small Pair of Side Cutters
- Needle Nose Pliers
- Solder Helper - Optional

3. Sanding and Filling

Sanding all the parts is a necessary process and the more time you take on this process the better the finish of your F-11D Blaster will be. Start with the 80 grit sandpaper and reduce the grit until a nice smooth finish is achieved.

PLEASE WEAR A DUST MASK & GOGGLES WHEN SANDING

DO NOT USE POWER TOOLS for sanding, these create heat very quickly and will soften the plastic and potentially ruin the part. Hand sanding is a much slower process but with patience and time you will achieve a really good finish ready for assembling and painting.

- Rounded Parts - Roll sandpaper around the part to sand, both inside and outside of barrels can be sanded this way.
- Flat Surfaces - Use a sheet of sandpaper on a flat surface to sand these parts.
- Awkward Shapes and Small Details - Use small metal files with shaped sides and sanding sticks to sand these parts, being careful not to sand away the details too much.

Check all parts for voids and gaps and fill with filler, once dry and hardened sand these parts again. Only move on to assembling the F-11D Blaster once you are really happy with the sanded finish of all the parts.

4. Priming and Painting

The main colours used for painting the F-11D Blaster are Black, White and Silver, but you can paint it in whatever colours you choose. I recommend using cans of acrylic spray paints, but you can also use an airbrush.

PLEASE WEAR A MASK WHEN PAINTING

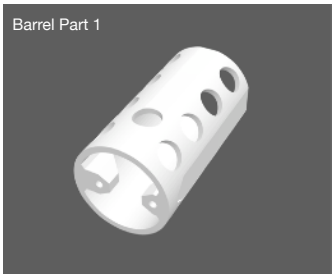
- Always paint in a well ventilated area, preferably outside.
- Wear PPE (Personal Protective Equipment) when painting.
- Hang parts for printing where possible - This gives a better angle for painting and also for drying the parts.
- Apply serval lights coats of paint rather than one which coat and try to avoid drips and runs.

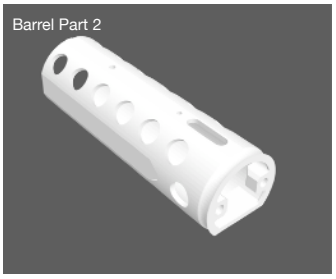
1. Filler Primer - Spray Paint all parts with Filler Primer - This will fill any very small voids or gaps. If there are still some voids and gaps fill these with filler and sand all the parts with very fine grit wet and dry sandpaper to achieve a real good smooth finish ready for the final colour.
2. Main Colour - Use several lights coats of paint allowing each to dry for the recommended time before applying the next coat. Don't rush and try to paint thick coats of paint, you will possibly loose some of the finer details on the parts, and possibly have to start the sanding process again.
3. Allow the paint to fully dry before attempting to assemble the F-11D Blaster. I recommend at least 24 hours.
4. Remember any parts that are required to be glued together will need to have the paint sanded first. Gluing Painted parts together is NOT recommended.
5. Weathering - This is a personal choice. If you want to give your F-11D Blaster the weathered look check out the many video's on YouTube showing how to achieve that weather look.

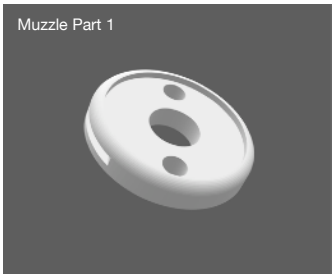
5. List of Parts

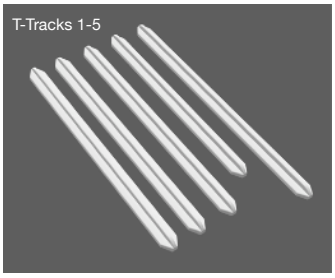
5.1. Barrel Front

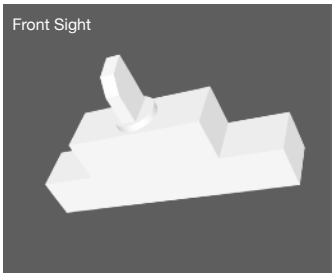
Name	Paint Colour	Supports Yes/No
Barrel Front Part 1	Black	NO
Barrel Front Part 2	Black	YES
Muzzle Part 1	White	NO
Muzzle Part 2	Black	YES
T-Tracks 1-5	Black	NO
Front Sight	Black	NO
Front Sight Guard	Black	YES
Barrel Flash Deflector	Black	NO
Barrel LED Holder Part 1	Black	NO
Barrel LED Holder Part 2	Black	NO
Barrel Fire LED Holder	Black	NO

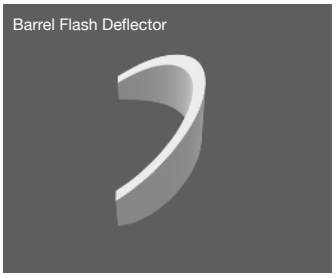


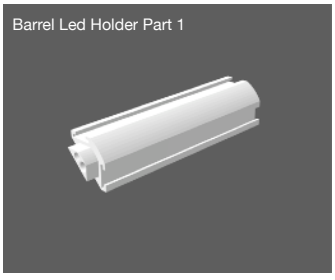


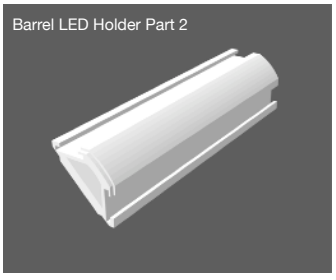


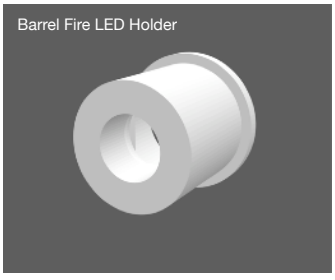


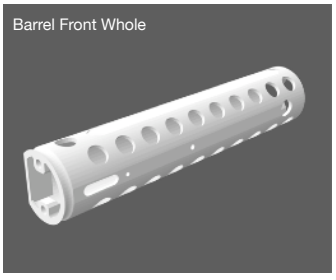










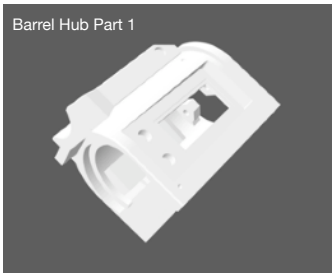


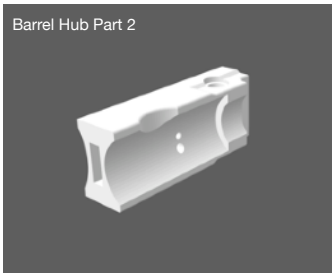
Notes

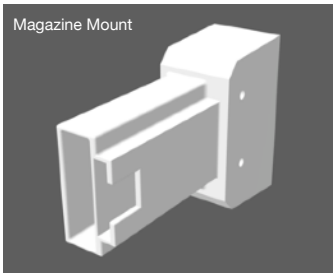
The front Barrel is also available as one part for people with a bigger print volume.

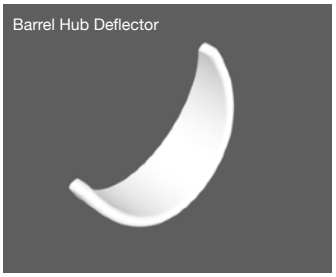
5.2. Barrel Hub

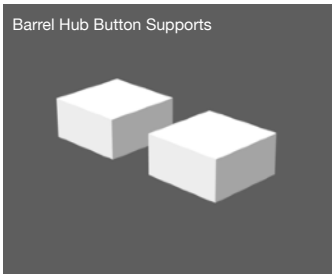
Name	Paint Colour	Supports Yes/No
Barrel Hub Part 1	White	YES
Barrel Hub Part 2	White	YES
Magazine Mount	Black	YES
Barrel Hub Deflector	White	NO
Barrel Hub Button Supports	ANY	NO

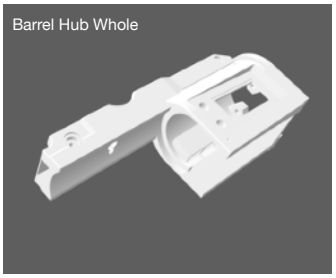










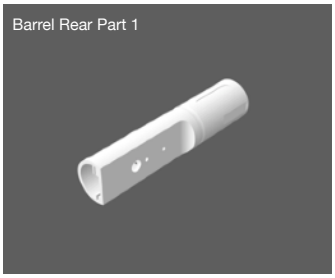


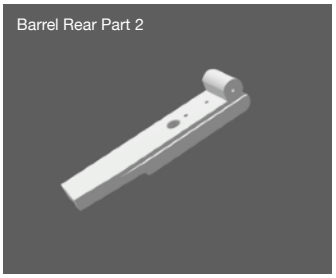
Notes

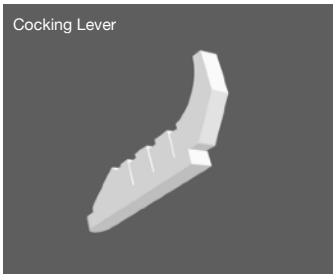
The Barrel Hub is also available as one part for people with a bigger print volume.

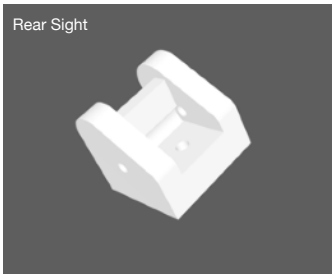
5.3. Barrel Rear

Name	Paint Colour	Supports Yes/No
Barrel Rear Part 1	Black	NO
Barrel Rear Part 2	Black	YES
Cocking Lever	Silver or Aluminium	YES
Rear Sight	Black	NO



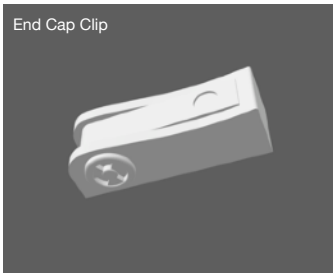


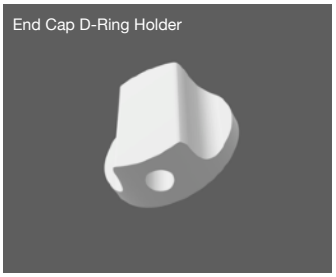




5.4. End Cap

Name	Paint Colour	Supports Yes/No
End Cap (Standard)	White	YES
End Cap (For Tactical Stock)	White	YES
End Cap Clip	Black	NO
End Cap D-Ring Holder	Silver or Aluminium	NO
End Cap D-Ring	Silver or Aluminium	NO



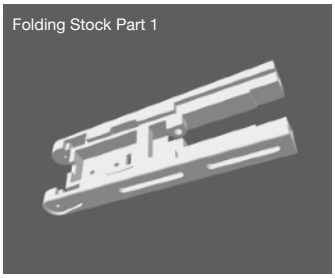


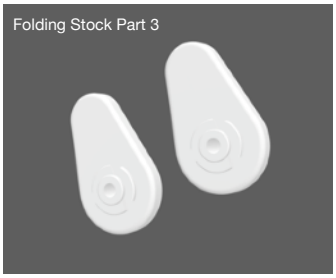
Notes

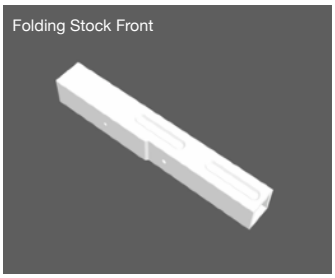
End Cap Standard is for using without the Tactical Stock - The Tactical Stock attaches to End Cap (Tactical Stock).

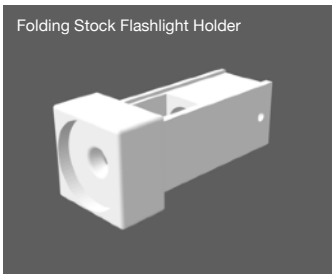
5.5. Folding Stock

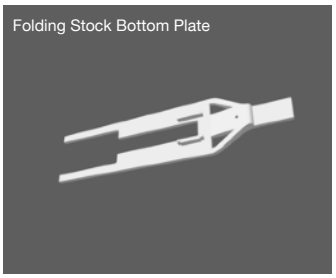
Name	Paint Colour	Supports Yes/No
Folding Stock Part 1	White	YES
Folding Stock Part 2	White	YES
Folding Stock Part 3 (LEFT & RIGHT)	White	NO
Folding Stock Part 4 (LEFT & RIGHT)	White	NO
Folding Stock Front	White	NO
Folding Stock Flashlight Holder	White	YES
Folding Stock Flashlight Cover	Silver or Aluminium	YES
Folding Stock Bottom Plate (Improved)	White	NO
Folding Stock Joiner Pegs	ANY	NO











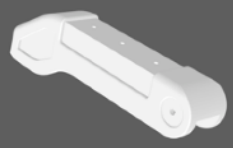
Notes

The Folding Stock Bottom Plate is optional.

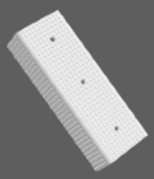
5.6. Front Grip

Name	Paint Colour	Supports Yes/No
Front Grip	White	YES
Front Grip Textured Bottom	Black	YES
Front Grip Texture RIGHT	Black	NO
Front Grip Texture LEFT	Black	NO
Front Grip Hinge Bracket	White	YES

Front Grip

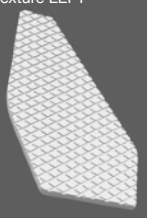


Front Grip Textured Bottom

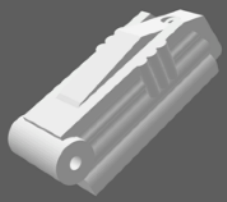


Front Grip Texture RIGHT

Front Grip Texture LEFT

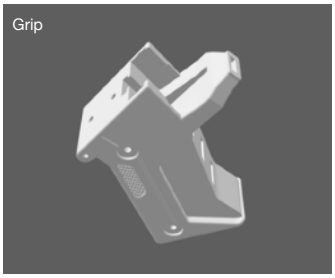


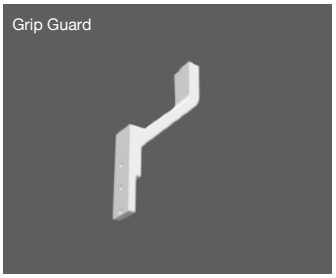
Front Grip Hinge Bracket

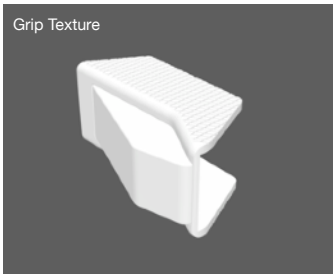


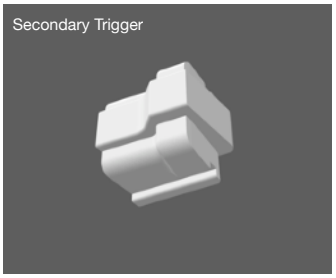
5.7. Grip and Trigger

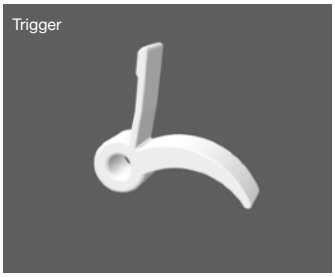
Name	Paint Colour	Supports Yes/No
Grip	White	YES
Grip Guard	White	NO
Grip Texture	Black	NO
Secondary Trigger	Black	YES
Trigger	Black	NO
Trigger Pin	White	NO

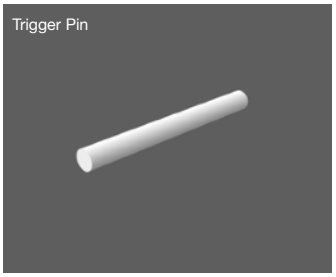






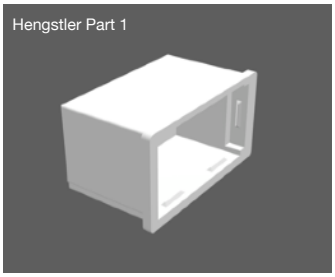


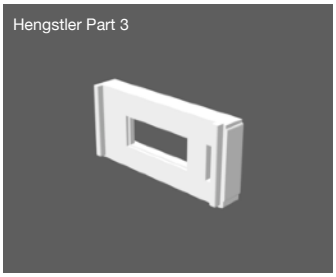


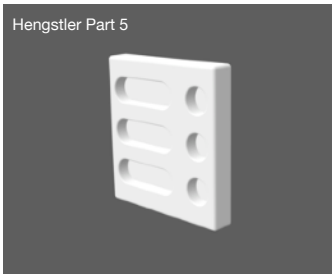


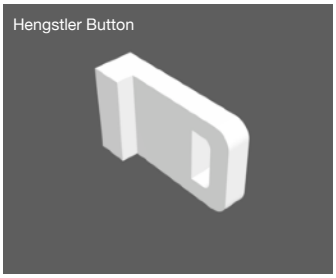
5.8. Hengstler

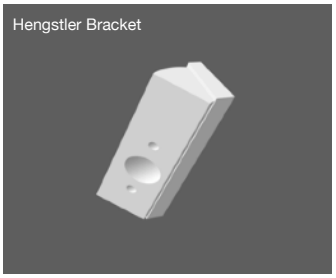
Name	Paint Colour	Supports Yes/No
Hengstler Part 1	Black	YES
Hengstler Part 2	Black	YES
Hengstler Part 3	Black	YES
Hengstler Part 4	Black	NO
Hengstler Part 5	Black	NO
Hengstler Part 6	Black	NO
Hengstler Button	Black	NO
Hengstler Bracket	Black	NO









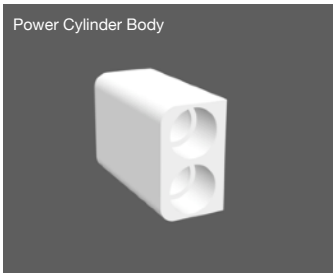


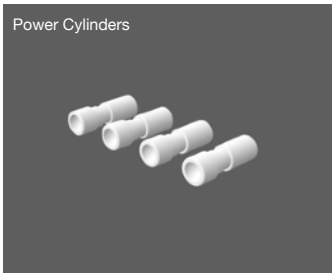
Notes

Hengstler Part 4 is held in place on Hengstler Part 2 by 4 x 6mm x 3mm Neodymium Magnets (2 on each part).

5.9. Magazine

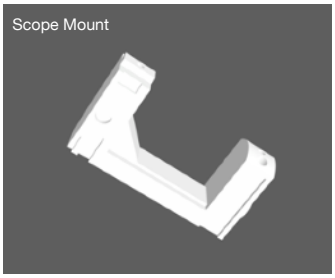
Name	Paint Colour	Supports Yes/No
Magazine	Black	NO
Magazine Cap	White (Black Pip)	YES
Power Cylinder Body	Black	NO
Power Cylinders	Black	NO
Magazine Small Part	Black	NO

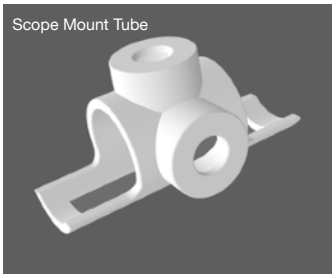


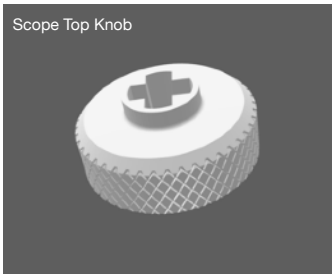


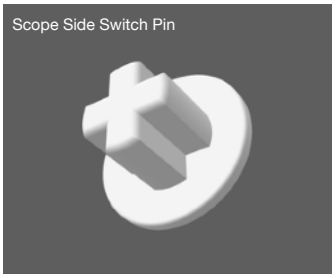
5.10. Scope Mount

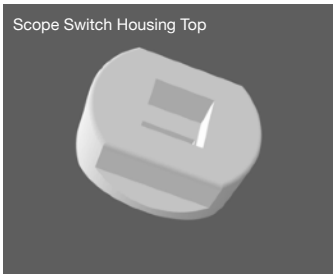
Name	Paint Colour	Supports Yes/No
Scope Mount	White	NO
Scope Mount Tube	Silver or Aluminium	YES
Scope Side Knob	Black	NO
Scope Top Knob	Black	NO
Scope Top Switch Pin	Black	Housing YES - Pin NO
Scope Side Switch Housing & Pin	Black	Housing YES - Pin NO
Scope Rail	Silver or Aluminium	NO

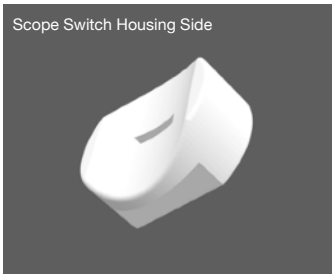










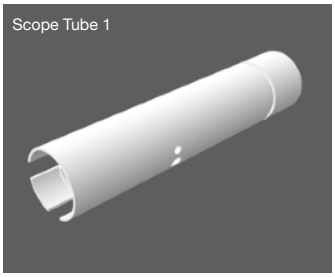


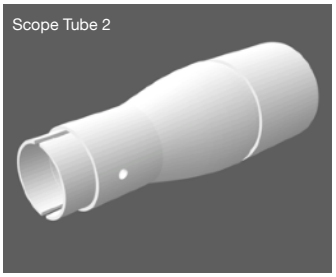
Notes

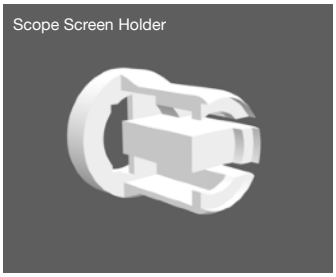
Top Knob is used as a switch for changing the scope display.
Side knob is for turning the Red Dot Laser LED On/Off.

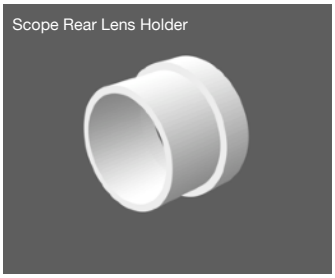
5.11. Scope

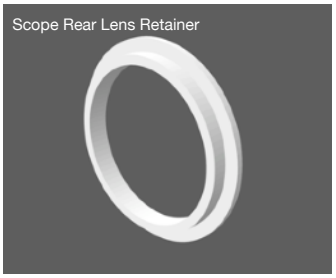
Name	Paint Colour	Supports Yes/No
Scope Tube 1	Black	NO
Scope Tube 2	Black	NO
Scope Screen Holder	Black	YES
Scope Laser LED Holder	Black	NO
Scope Rear Lens Holder	Black	NO
Scope Rear Lens Retainer	Black	NO
Scope Rear Cover	Silver or Aluminium	NO
Scope Front Cover	Silver or Aluminium	NO

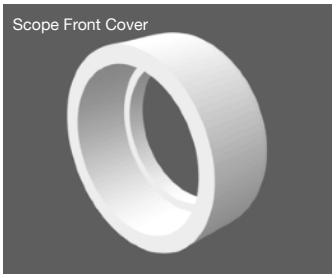










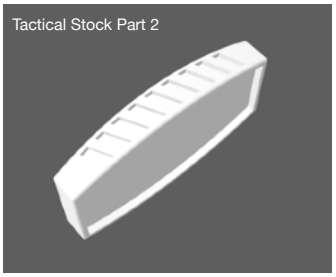


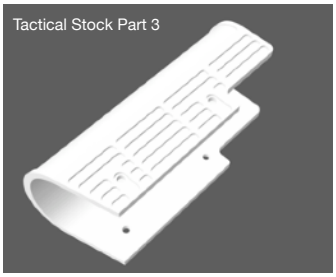
Notes

Screen Holder holds both the DFRobot Beetle and 0.49” OLED Display.

5.12. Tactical Stock

Name	Paint Colour	Supports Yes/No
Tactical Stock Part 1	Black	YES
Tactical Stock Part 2	Black	YES
Tactical Stock Part 3	Black/White	YES





Notes

Tactical Stock Part 3 - The top recessed part is white the rest is black.

6. Sticker Templates

Name	Print Size	Location
Folding Stock Aurebesh 1	12mm x 9mm	Folding Stock Front LEFT
Folding Stock Aurebesh 2	12mm x 9mm	Folding Stock Front RIGHT
Folding Stock Front Pill	45mm x 7.2mm	Folding Stock Front LEFT Side
Folding Stock Rear Pill	44mm x 4.8mm	Folding Stock RIGHT above Grip
Rear Barrel Pill 1	50mm x 10.7mm	Rear Barrel LEFT
Rear Barrel Pill 2	50mm x 10.7mm	Rear Barrel RIGHT

Folding Stock Aurebesh 1

Folding Stock Aurebesh 2

Folding Stock Front Pill

Folding Stock Rear Pill

Rear Barrel Pill 1

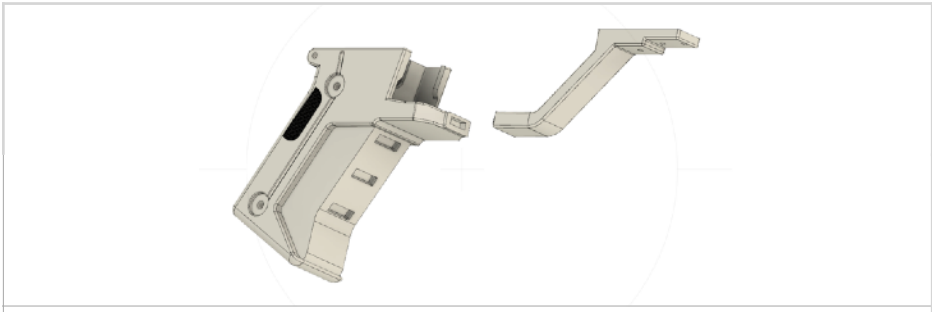
Rear Barrel Pill 2

7. Hardware Components

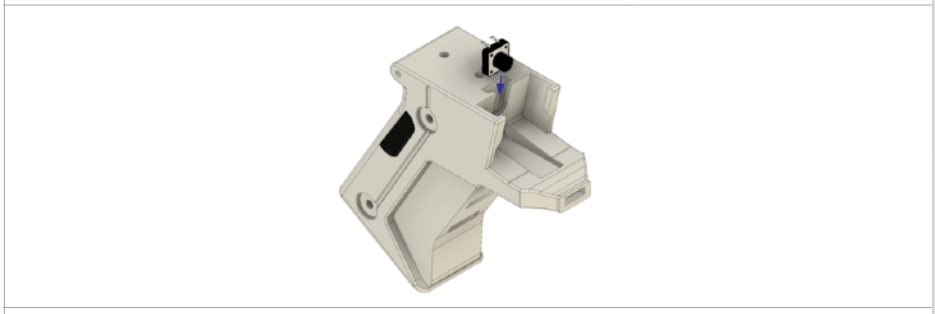
Name & Type	Length	Quantity	Location
M4 Button Head	8mm	4	Grip Sides
M4 Button Head	20mm	2	Stock to Grip
M3 Button Head	20mm	2	Stock to Grip
M3 Button Head	10mm	2	Grip to Stock
M6 Socket Head	20mm	2	Muzzle to Barrel
M4 Button Head	20mm	2	Front Barrel to Barrel Hub
M4 Button Head	20mm	2	Rear Barrel 1 to Rear Barrel 2
M3 Button Head	14mm	1	Rear Sight to Barrel
M3 Button Head	8mm	2	Scope Rail to Barrel Hub
M3 Button Head	50mm	2	Scope Rail to Scope
M3 Button Head	10mm	1	Scope Rail to Rear Sight
M3 Button Head	25mm	2	Stock to Rear Barrel
M3 Button Head	25mm	1	Front Grip Hinge to Barrel
M4 Button Head	12mm	2	Front Grip to Front Grip Hinge
M3 Button Head	6mm	3	Grip Texture to Front Grip
M3 Button Head	14mm	1	Flashlight Housing to Stock
M4 Button Head	30mm	1	Front Stock to Front Barrel
M3 Button Head	10mm	2	Magazine to Housing (Optional)
M3 Button Head	20mm	2	Hengstler to Hengstler Bracket
M3 Button Head	20mm	1	Stock Plate to Stock
M4 Button Head	25mm	2	Tactical Stock to End Cap
M4 Button Head	20mm	4	Cheek Rest to Tactical Stock
M3 Gub Screw	10mm	1	End Cap D-Ring Hoder to End Cap
M3 Nut & Washer	M3	1	End Cap D-Ring Hoder to End Cap
Neodymium Magnets	6mm x 4mm	4	Barrel Hub to Magazine
Neodymium Magnets	6mm x 3mm	4	Hengstler Lid to Hengstler Body
Neodymium Magnets	4mm x 3mm	8	Hengstler Front to Hengstler Body
Square Red Transparent Acrylic	Square	1	Scope Lens
Square Red Diffuser	Square	2	Hengstler & Magazine LED's
Round Glass Cabochon	30mm	1	Scope Lens
Round Glass Cabochon	20mm	1	Flashlight Lens

8. Assembly Guide

8.1. Grip Unit



Glue the “Grip Guard” to the “Grip”

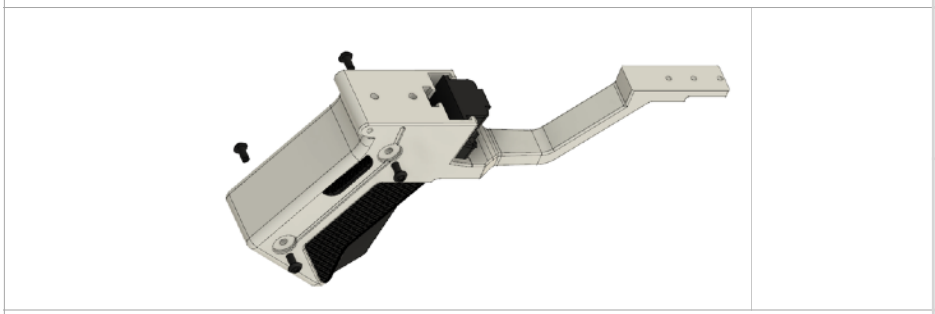


Insert the “12mm Tactile Switch” into the groove in the top of the “Grip”

Electronics:
12mm x12mm x 9mm Tactile Switch

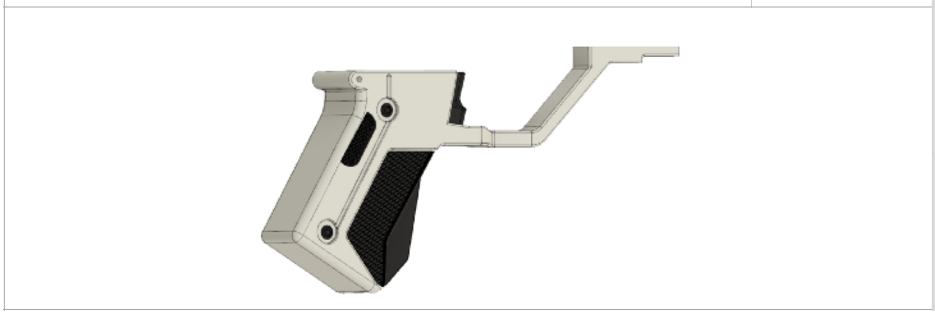
Slide “Secondary Trigger” into the groove on the top of the” Grip”

Glue the "Grip Texture” to the front of the “Grip”



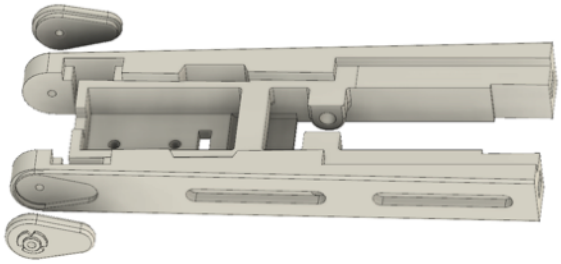
Add two decorative screws to each side use M4 x 8mm Button Head Screws

Hardware:
4 x M4 x 8mm Button Head Screws

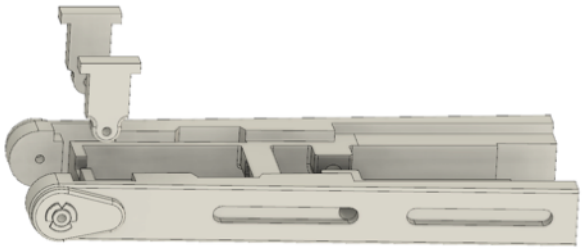


Completed “Grip Unit”

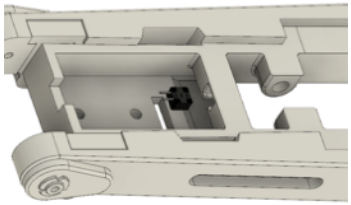
8.2. Rear Folding Stock Unit



Glue "Folding Stock Part 3 (LEFT & RIGHT)" onto “Folding Stock Part 1”

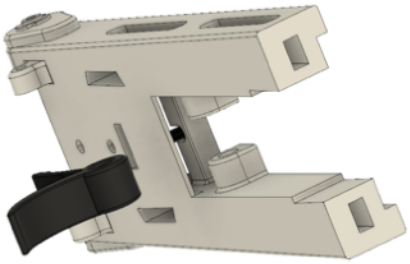


Glue "Folding Stock Part 4 (LEFT & RIGHT)" into the slots at the rear of “Folding Stock Part 1”

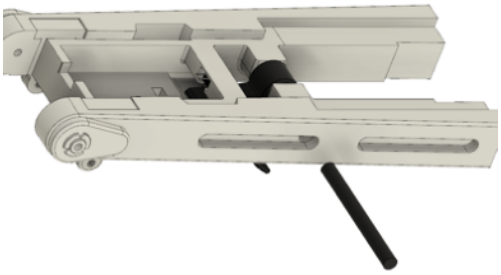


Slide a 6mm Tactile Switch into the recess on “Folding Stock Part 1”

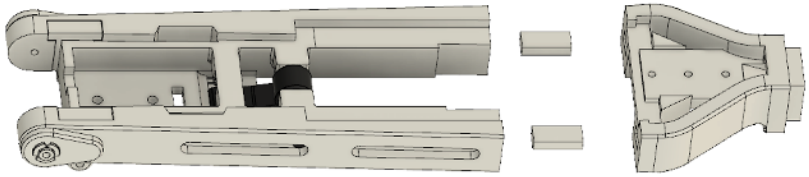
Electronics:
6mm x 6mm x 8mm Tactile Switch



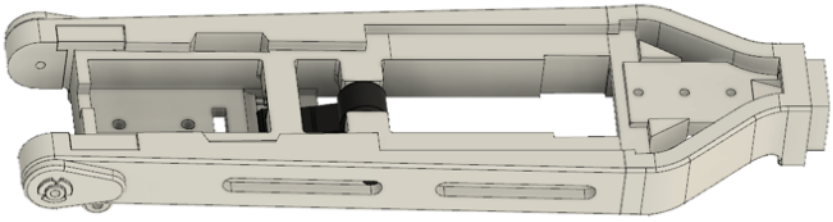
Slide the “Trigger” under the Tactile Button and position between the holes



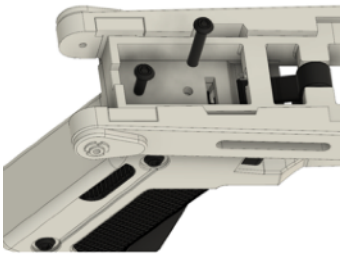
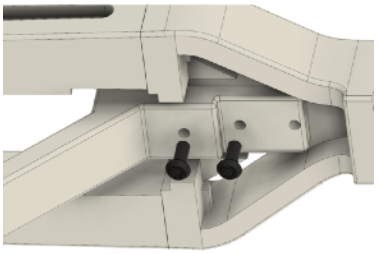
Slide the "Trigger Pin” into the hole on the right side of “Folding Stock Part 1” until flush with the inner edge

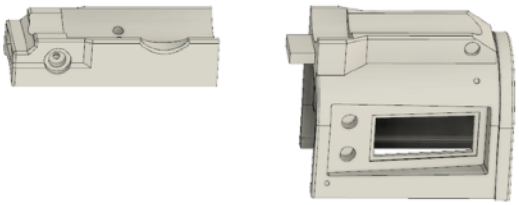


Glue the "Folding Stock 1 & 2 Joiner Pegs” in the holes on the front of “Folding Stock Part 1” then glue “Folding Stock Part 2” to the "Folding Stock 1 & 2 Joiner Pegs” and “Folding Stock Part 1”

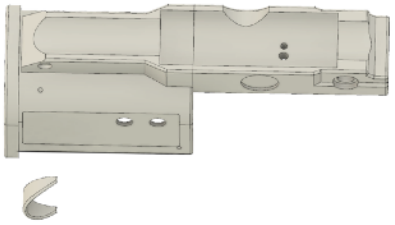


Completed “Rear Folding Stock Unit”

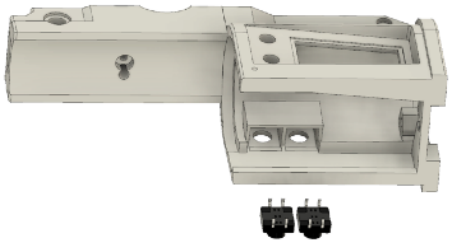
	Line up the Rear Folding Stock and Grip Unit together
	Use two M4 x 20mm Button Head Screws to secure the Rear Folding Stock to The Grip ***Hardware:*** 2 x M4 x 20mm Button Head Screws
	Use two M3 x 20mm Button Head Screws to secure the Grip Unit to the back of the Rear Folding Stock ***Hardware:*** 2 x M3 x 20mm Button Head Screws
	Use two M3 x 10mm Button Head Screws to secure the front of the Grip Guard to the front of the Rear Folding Stock (Leave the Front Hole clear as this will be used later in the build ***Hardware:*** 2 x M3 x 10mm Button Head Screws
	Completed “Rear Folding Stock Unit” and “Grip Unit”



Glue “Barrel Hub Part 1” to “Barrel Hub Part 2”

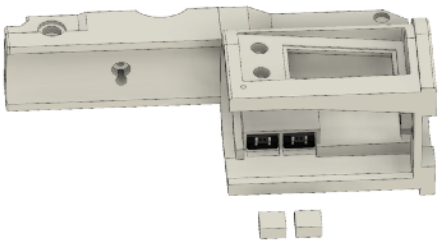


Glue the “Barrel Hub Deflector” to the “Barrel Hub”

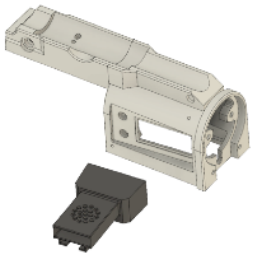


Slide the two x 12mm Tactile Switches into the slots making sure the Push Buttons move freely

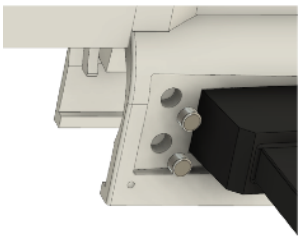
Electronics:
2 x 12mm x 12mm x 6mm Tactile Switches



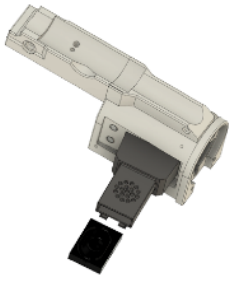
Place a “Barrel Hub Button Support” onto of each Tactile Button



Glue the “Magazine Mount” to the “Barrel Hub” (Speaker holes face upwards)

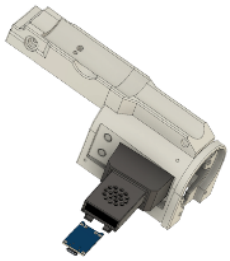


Glue two 6mm x 4mm Neodymium Magnets into the two holes of to the left of the “Magazine Mount”



Slide the speaker into the “Magazine Mount”

Electronics:
Speaker

		Slide the TP4056 Battery Charger into the slot under the speaker holder. ***Electronics:*** TP4056 Battery Charger

8.5. Front Barrel Unit

Glue "Barrel Front Part 1” to “Barrel Front Part 2” Making sure they are aligned

Glue "Barrel LED Holder Part 1” to “Barrel LED Holder Part 2”

Slide one LED Strip up on each side of “Barrel LED Holder”

Electronics:
2 x Strips of 33 Neopixel LEDS - Cut from a 144 LED Strip

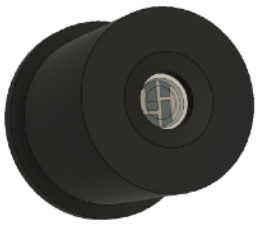
Slide Completed “Barrel LED Holder” into the Bottom of the Completed “Front Barrel”

Glue the “Front Barrel Deflector” to the left side front of the "Front Barrel”

Glue the “T-Tracks” to the”Front Barrel”
NOTE: They are different lengths so make sure you fit correctly

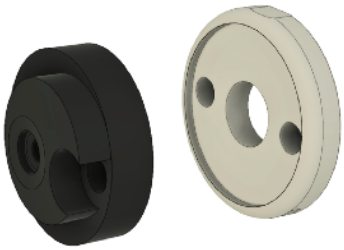
Push the Single WS2812B Neopixel LED into the “Barrel Fire LED Holder”

Electronics:
Single 10mm WS2812B Neopixel LED



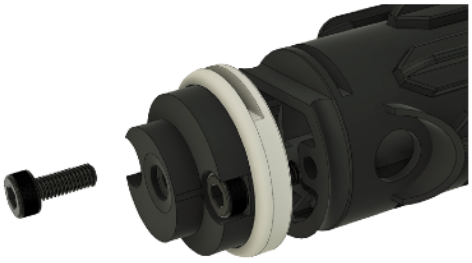
It should look like this

Slide the “Barrel Fire LED Holder” into “Muzzle Part 2”



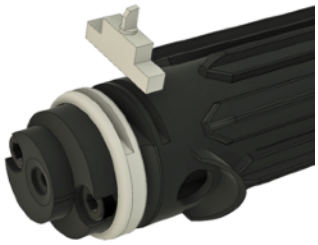
Line up the “Muzzle Part 2” with Muzzle Part 1” - Option to glue if needed

Align both “Muzzle Part 1” and “Muzzle Part 2” to the front of the “Front Barrel”

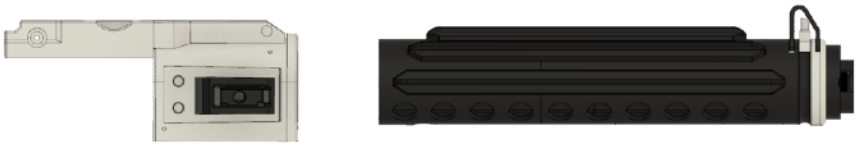


Use two x M6 x 20mm Socket Head Screws to secure “Muzzle Part 1” and “Muzzle Part 2” to the “Front Barrel”

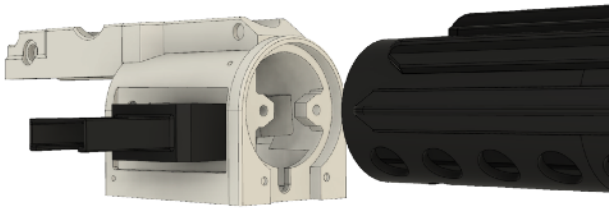
Hardware:
2 x M6 x 20mm Socket Head Screws

	Glue the “Front Sight Part” onto the “Front Barrel”
	Glue the "Front Sight Guard” onto the “Front Barrel”
	Completed “Front Barrel Unit”

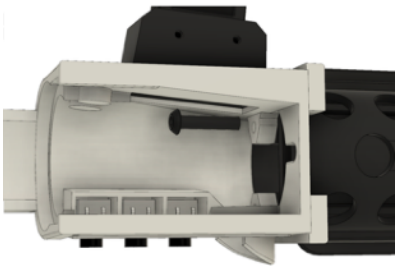
8.6. Front Barrel Unit and Barrel Hub Unit



Align the “Front Barrel Unit” with the “Barrel Hub Unit”



Align the holes in both parts and push together



(Optional) Screw together using a single M4 x 20mm Button Head Screw (You can only use one as the switch box blocks access to the other hole) The parts are held together by further parts further on in the build

Hardware:
1 x M4 x 20mm Button Head Screw

Completed " Front Barrel Unit” and “Barrel Hub Unit”

8.7. Barrel Rear Unit

Line up the parts “Barrel Rear Part 1” and “Barrel Rear Part 2”

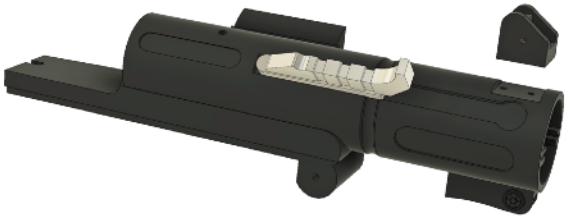
Secure using two x M4 x 20mm Button Head Screws (Option - you can also add glue for extra strength)

Hardware:
2 x M4 x 20mm Button Head Screws

Glue the “Hengstler Bracket” to the “Rear Barrel” IMPORTANT - Make sure the holes are lined up

Glue the "Barrel End Clip” to the underside of “Barrel Rear Part 1

Glue the “Cocking Lever” inside the cocking channel of the “Barrel Rear Part 1”



Align the “Rear Sight” on to “Barrel Rear Part 1”

Then secure the “Rear Sight” with M3 x 14mm Button Hear Screw to the “Barrel Rear Part 1”

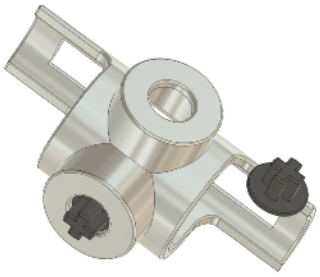
Hardware:
1 x M3 x 14mm Button Head Screw

	Completed “Barrel Rear Unit”

8.8. Scope Unit

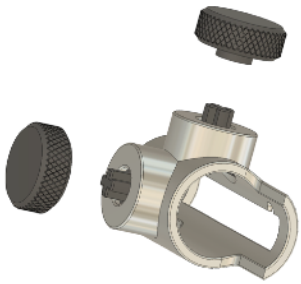
Push a 6mm 2-Pin Tactile Switches into "Scope Switch Housing Top" and "Scope Switch Housing Side"

Electronics:
6mm 2-Pin Tactile Switch

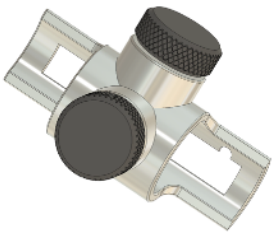


Insert the "Scope Top Switch Pin" and "Scope Side Switch Pin" into the "Scope Mount Tube" Holes from the inside

Insert the "Scope Switch Housing Top" and "Scope Switch Housing Side" in the "Scope Mount Tube" from inside the Tube with both "Scope Switch Housings" and Tactile Buttons installed.

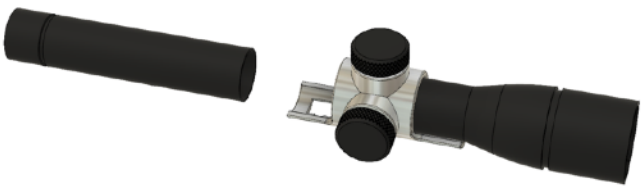


Push Fit the "Scope Side Knob" and "Scope Top Knob" to the "Scope Top Switch Pin" and "Scope Side Switch Pin" the knobs should activate the Tactile Buttons when pushed and turn freely.



The completed "Scope Mount" should look like this with 2 working push button switches.

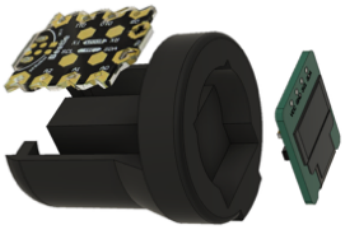
Electronics:
One button changes the Scope Display, the other turns the Laser LED On and Off



Slide both "Scope Tube 1" and "Scope Tube 2" into "Scope Mount Tube" making sure to align the holes. Use a pice of tape to hold in place until screwed together later in the build

Place the 5V Red Laser Dot LED into the “Scope Laser LED Holder” and push into the front of “Scope Tube 1” and glue in needed then glue the “Scope Front Cover” to the front of “Scope Tube 1”

Electronics:
5V Red Dot Laster Diode LED



DFRobot Beetle and 0.49” OLED are placed into the "Scope Screen Holder” before placing into “Scope Tube 2”

Electronics:
DFRobot Beetle
0.49” OLED Display

Slide the "Scope Screen Holder” inside “Scope Tube 2” as far as it will go

Place the 30cm Cabochon Lens inside “Scope Rear Lens Holder” and secure it with “Scope Rear Lens Retainer” and push into “Scope Tube 2”

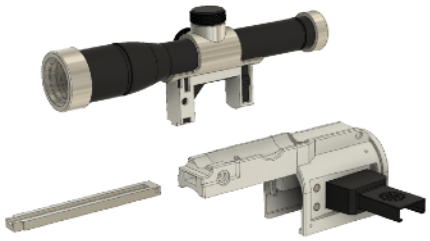
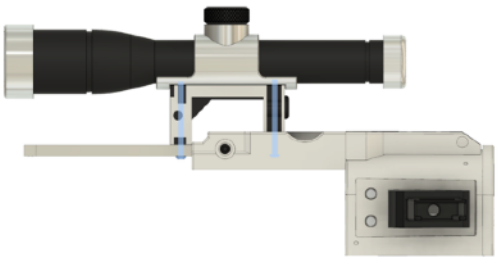
Hardware:
30mm Round Glass Cabochon

Fit the “Scope Rear Cover” over the end of “Scope Tube 2”

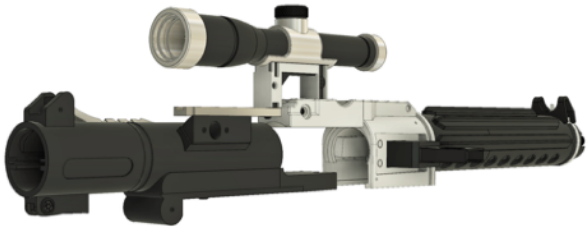
Align the Scope onto the “Scope Mount” aligning the holes and making sure you have it oriented the correct way

Completed “Scope Unit”

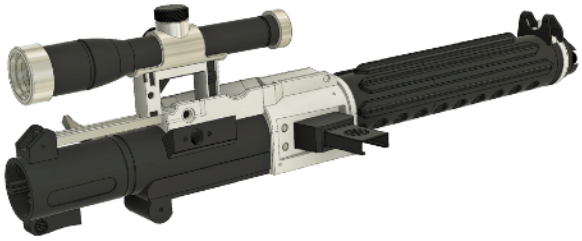
8.9. Scope Unit and Barrel Hub Unit

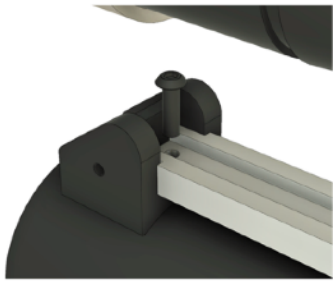
	Insert the "Scope Rail" into the whole in the back of “Barrel Hub Part 2”
	Glue the "Scope Rail” or use two x M3 x 8mm Button Head Screws to secure ***Hardware:*** 2 x M3 x 8mm Button Head Screws
	Secure the “Scope Mount” and “Scope Mount Tube” to the “Barrel Hub Unit” using two x M3 x 50mm Button Head Screws. The Screws need to be a minimum of 40mm, 42mm or 45mm length are even better ***Hardware:*** 2 x M3 x 50mm Button Head Screws
	Completed "Scope Unit” and “Barrel Hub Unit”

8.10. Rear Barrel Unit and Barrel Hub Unit



Slide the “Rear Barrel Unit” into the “Barrel Hub Unit”





Secure the "Scope Rail” to the “Rear Sight” with a M3 x 10mm Button Head Screw, You will need an Allen Key to tighten this one due to the space under the “Scope Unit”

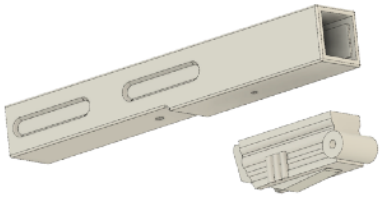
Electronics:
1 x M3 x 10mm Button Head Screw

Completed "Rear Barrel Unit and Barrel Hub Unit”

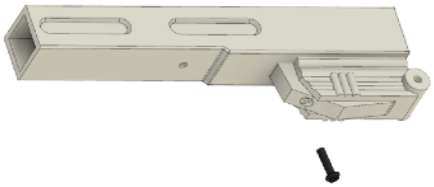
8.11. Grip, Folding Stock, Barrels & Hub Units

	Glue the “Folding Stock Unit” to the “Barrel Hub Unit”
	Use two x M3 x 25mm Button Head Screws to secure the rear of the “Rear Folding Stock Unit” to the “Barrel Hub Unit” ***Hardware:*** 2 x M3 x 25mm Button Head Screws
	Completed "Grip Unit”, “Rear Folding Stock Unit”, “Rear Barrel Unit”, Front “Barrel Unit” and Barrel Hub Unit

8.12. Front Folding Stock Unit

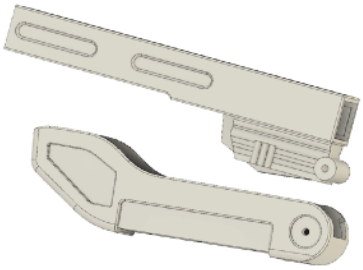


Glue "Front Grip Hinge Bracket" to “Folding Stock Front”

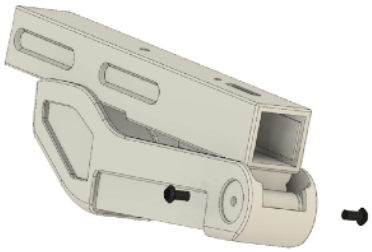


Add the M3 x 25mm Button Head Screw to make it more secure

Hardware:
1 x M3 x 25mm Button Head Screw

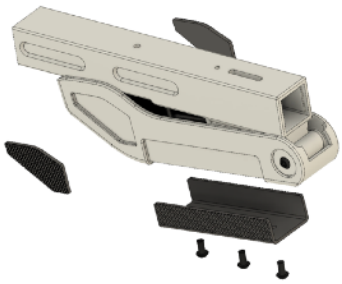


Slide the "Front Grip” over the "Front Grip Hinge Bracket” aligning the holes



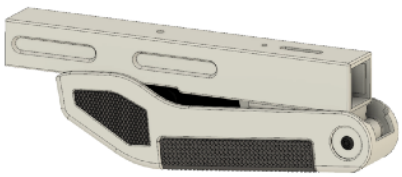
Secure the "Front Grip” to the "Front Grip Hinge Bracket” using two M4 x 12mm Button Head Screws

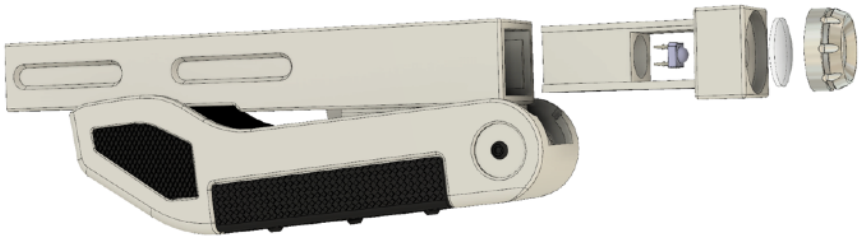
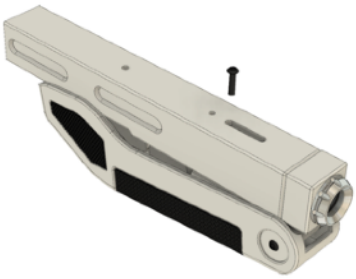
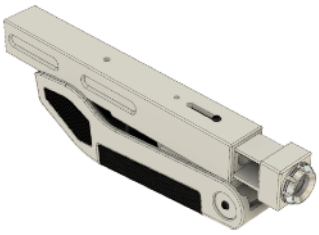
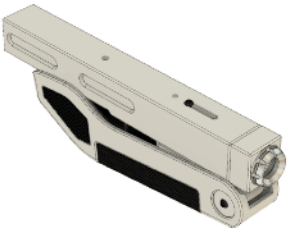
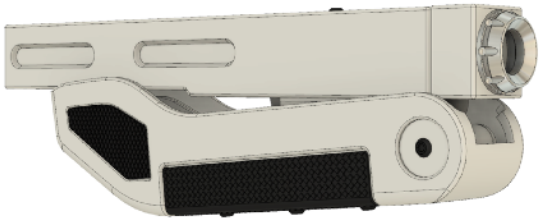
Hardware:
2 x M4 x 12mm Button Head Screws



Glue "Front Grip Texture Left” and “Front Grip Texture Right” inside the recesses on the front of "Front Grip” Use three M3 x 6mm Button Head Screws to secure the “Front Grip Texture Bottom” to the “Front Grip”

Hardware:
3 x M3 x 6mm Button Head Screws



	Place the Piranha LED inside the "Folding Stock Flashlight Holder” Place a 20mm Glass Cabochon inside the “Folding Stock Flashlight Cover” and then push into the recess on the front of "Folding Stock Flashlight Holder” ***Electronics:*** White Piranha LED ***Hardware:*** 20mm Round Glass Cabochon
	Use the M3 x 14mm Button Head Screw to secure the "Folding Stock Flashlight Holder” to “Folding Stock Front” The slot enable the screw to be loosened so the "Folding Stock Flashlight Holder” can be slid in and out to change the Flashlight LED if needed ***Hardware:*** 1 x M3 x 14mm Button Head Screw
	"Folding Stock Flashlight Holder” extended
	"Folding Stock Flashlight Holder” Normal Position
	Completed “Front Folding Stock Unit”

8.13. Folding Stock, & Barrel Units

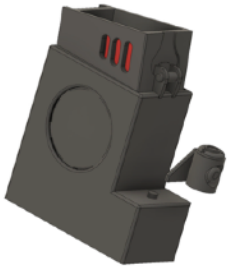
Position the “Front Folding Stock” on to the front of “Folding Stock Part 2” and glue if required

Secure with M4 x 30mm Button Head Screw

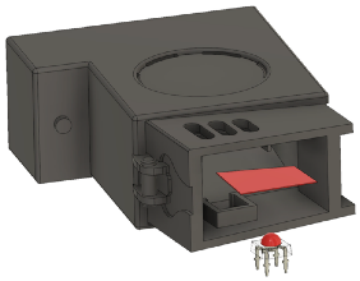
Hardware:
1 x M4 x 30mm Button Head Screw

Completed "Front Folding Stock Unit”, “Folding Stock Unit” and Barrel Unit”

8.14. Magazine Unit



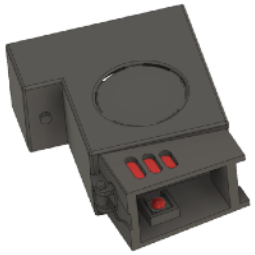
Glue the “Magazine Small Part” onto the “Magazine”



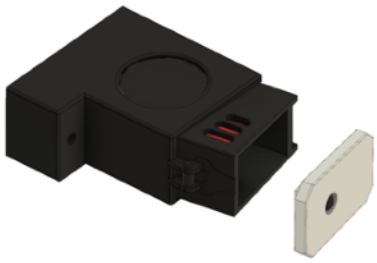
Slide the Red film diffuser into the groove and the 5mm red LED into the LED Holder inside the “Magazine”

Electronics:
Red Piranha LED

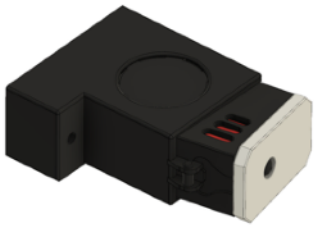
Hardware:
Opaque Red Film



Parts Fitted



Glue the “Magazine Cap” to the end of the “Magazine” (I recommend using Hot Glue in case you need to change the LED)

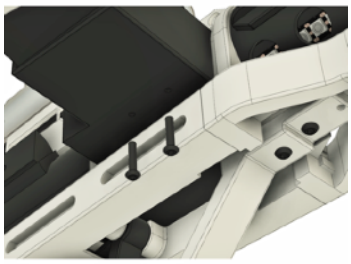
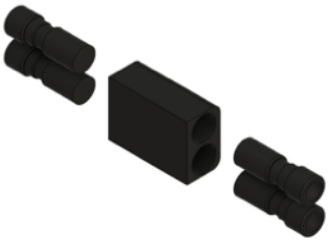
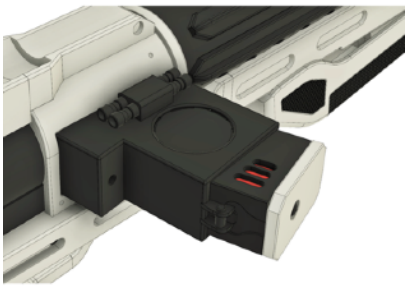


Paint the rounded detail of the “Magazine Cover” in black

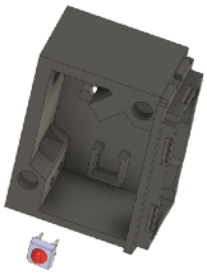
Glue two 6mm x 4mm Neodymium Magnets into the two holes of the “Magazine”

Hardware:
2 x 6mm x 4mm Neodymium Magnets

Make sure the magnets sit flush

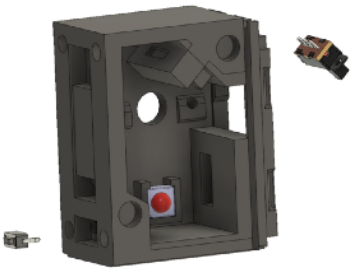
	Slide the completed “Magazine Unit” on to the “Magazine Mount” The magnets should hold it place
	Option - Use two M3 x 14mm Button Head Screws to secure the “Magazine Unit” to the “Magazine Mount” ***Hardware:*** 2 x M3 x 14mm Button Head Screws
	Glue the 4 “Power Cylinders” into the “Power Cylinder Body”
	Glue the completed “Power Cylinders” to the top of the “Magazine Unit”
	Complete “Magazine Unit”

8.15. Hengstler Unit



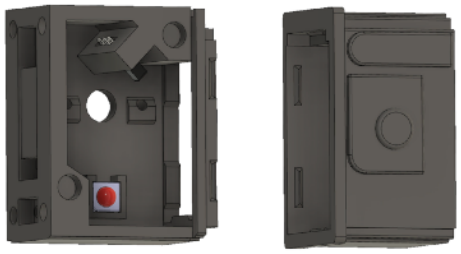
Insert the 5mm red Piranha LED into the LED Holder inside the “Hengstler Part 2”

Electronics:
Red Piranha LED
68Ω Resistor

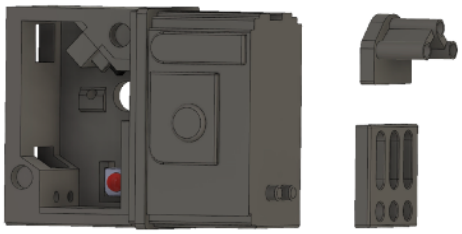


Fit the 6mm x 4mm Tactile Switch into the small hole on the front of “Hengstler Part 2” and the On/Off Slide switch in the recess inside

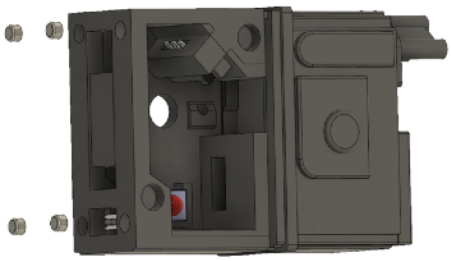
Electronics:
6mm x 4mm Tactile Switch
Mini Slide Switch



Push fit “Hengstler Part 1” onto “Hengstler Part 2” (Snap Fit)

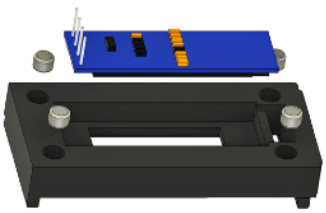


Glue “Hengstler Part 5” and “Hengstler Part 6” onto the front of “Hengstler Part 1”



Glue four x 4mm x 3mm Neodymium Magnets into the front of “Hengstler Part 2”

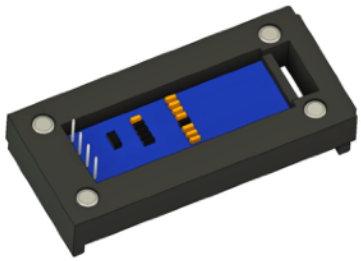
Hardware:
4 x 4mm x 3mm Neodymium Magnets



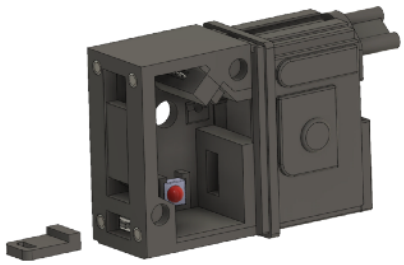
Place the 0.91” OILED Display inside the cutout of “Hengstler Part 3”
Glue four x 4mm x 3mm Neodymium Magnets into the holes on “Hengstler Part 3”

Electronics:
0.91” OLED Display

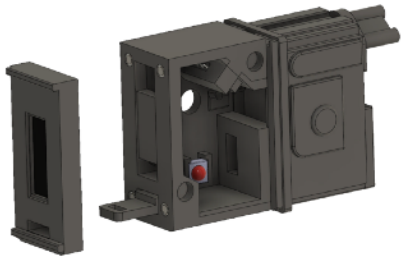
Hardware:
4 x 4mm x 3mm Neodymium Magnets



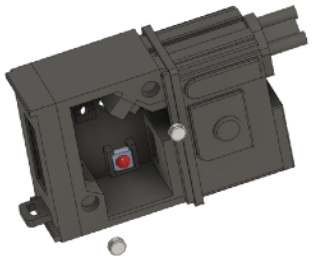
Make sure the Magnets are sitting flush



Place the "Hengstler Button" into the space where you fitted the Switch (DO NOT GLUE)

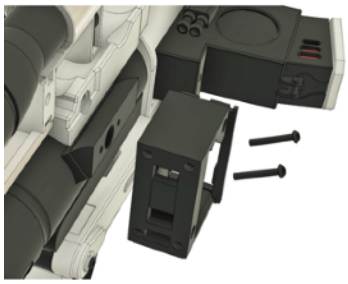


Carefully place “Hengstler Part 3” with the OLED Display on to “Hengstler Part 2”
The Magnets should hold it in place and the "Hengstler Button” should move freely



Glue two 6mm x 3mm Neodymium Magnets into the holes on the side of “Hengstler Part 2”
Making sure they are flush

Hardware:
2 x 6mm x 3mm Neodymium Magnets



Use two M3 x 20mm Button Head Screws to secure the Hengstler Unit to the “Hengstler Bracket”

Hardware:
2x M3 x 20mm Button Head Screws

Glue two 6mm x 3mm Neodymium Magnets into the holes on the back of “Hengstler Part 4”
Making sure they are flush
Carefully glue the edges of the Red film diffuser over the holes on “Hengstler Part 4

Hardware:
2 x 6mm x 3mm Neodymium Magnets

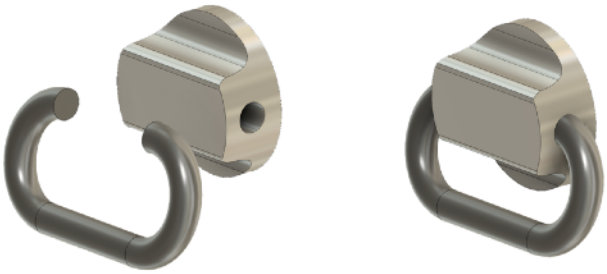
It should look like this

Completed “Hengstler Unit”

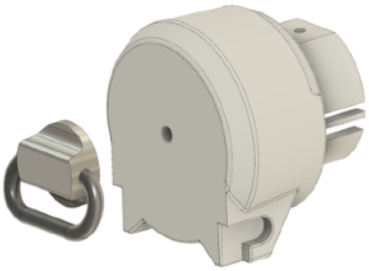
8.16. End Cap Unit

Drive the M3 x 10mm Set Screw into the back of “End Cap D-Ring Holder”

Hardware:
1 x M3 x 10mm Set Screw



Attach the “End Cap D-Ring” on to the “End Cap D-Ring Holder”



Use the Set Screw to secure the “End Cap D-Ring Holder” to the “End Cap”

Optional - Use a washer and M3 Nut to secure the “End Cap D-Ring Holder” to the “End Cap”

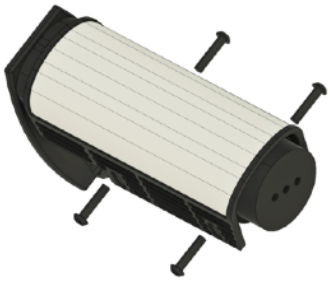
Hardware:
1 x M3 Nut & Washer

Slot the completed “End Cap” into the Rear Barrel
Loosen the “Rear Sight“ Screw first and use this Screw to secure the “End Cap” into the “Rear Barrel”

Completed “End Cap” (Standard Version)

8.17. Tactical Stock Unit

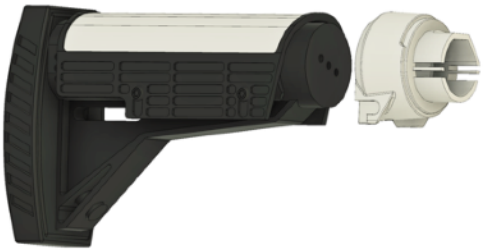
Slide "Tactical Stock 3” over “Tactical Stock 1”
Paint the top of “Tactical Stock 3” White



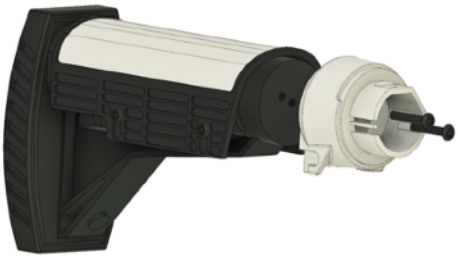
Use four M4 x 20mm Button Head Screws to secure “Tactical Stock 3” to “Tactical Stock 1”

Hardware:
4 x M4 x 20mm Button Head Screws

Glue “Tactical Stock 2” to “Tactical Stock 3”

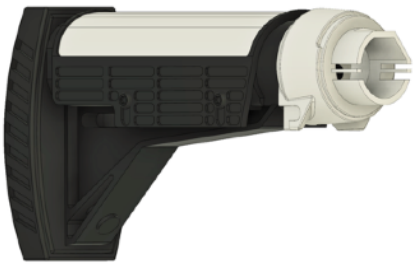


Align the “Tactical Stock Unit” with the “End Cap Tactical Stock” making sure you align the holes



Use two M4 x 25mm Button Head Screws to secure the "Tactical Stock Unit” to the “End Cap Tactical Stock”

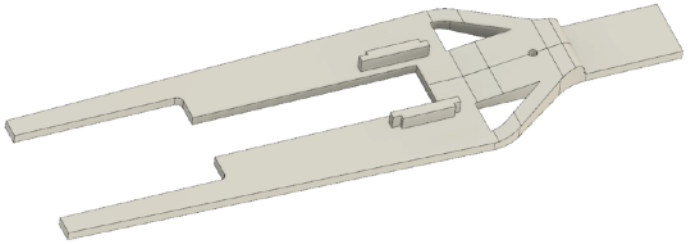
Hardware:
2 x M4 x 25mm Button Head Screws



Completed “Tactical Stock Unit”

Loosen the “Rear Sight” Screw and slide the “Tactical Stock Unit” in to the “Rear Barrel” and secure using the Rear Sight“ screw

8.18. Stock Bottom Plate

	Optional - Fit the “Stock Botton Plate” to the underside of the “Folding Stock Part 1”
	Use the M3 x 20mm Button Head Screw to secure the “Stock Bottom Plate” to the “Folding Stock Part 1”
	F-11D Blaster Complete

8.19. TDTroniX F-11D PCB Electronics

The TDTroniX F-11D PCB and TDTroniX 18650 Battery Holder slide into the back of “Rear Barrel Part 1”

Electronics:
F-11D PCB
Arduino Nano
DFPlayer Mini
PAM8403 Amplifier
18650 Batter
TDTroniX 18650 Battery Holder

8.20. Stickers

	Located on both sides of the front of the folding stock, just before the flashlight
	***Standard Version:*** Located on both sides of the rear barrel, inside pill-shaped recesses
	***Heavy Version:*** Located on both sides of the rear barrel, inside pill-shaped recesses
	***Standard Version:*** Located only on the right side of the folding stock, inside the first pill recess above the handle
	***Heavy Version:*** Located only on the right side of the folding stock, inside the first pill recess above the handle
	***Optional:*** This one seems to be optional and appears only on few blasters. It's located on the left side of the "Folding Stock Front" only, inside the pill recess near the "Flashlight Holder", right above the "Front Grip"

9. Completed Images

 View Larger Image	F-11D Standard
 View Larger Image	F-11D Standard
 View Larger Image	F-11D Heavy
 View Larger Image	F-11D Heavy

10. YouTube Video

F-11D Blaster - BLTroniX Electronics Kit Demo

11. Links to the Additional Kits

To purchase any of the Kits just Click the Link to the Right.

F-11D Blaster BLTroniX Electronics Kit Available as a Self Build or Pre Built Kit.	F-11D Electronics Kit
F-11D Blaster Scope Electronics Kit Add-On Adds an Animated Reticle and Red Dot Laser to the Scope. Available as a Self Build or Pre-Built Kit.	Scope Add-On Kit
F-11D Blaster Rifle Hardware Kit Contains all the Screws and Springs Needed for your F-11D Stormtrooper Blaster Rifle Build.	F-11D Hardware Kit

Other Electronics Kits and Components are available for your Prop Builds so why not Visit the ***PropTroniX Store***.