



★ **FREEDOM** ★  
**COMPANY**  
DEV TEAM



**PROJECT ARK 2.0**



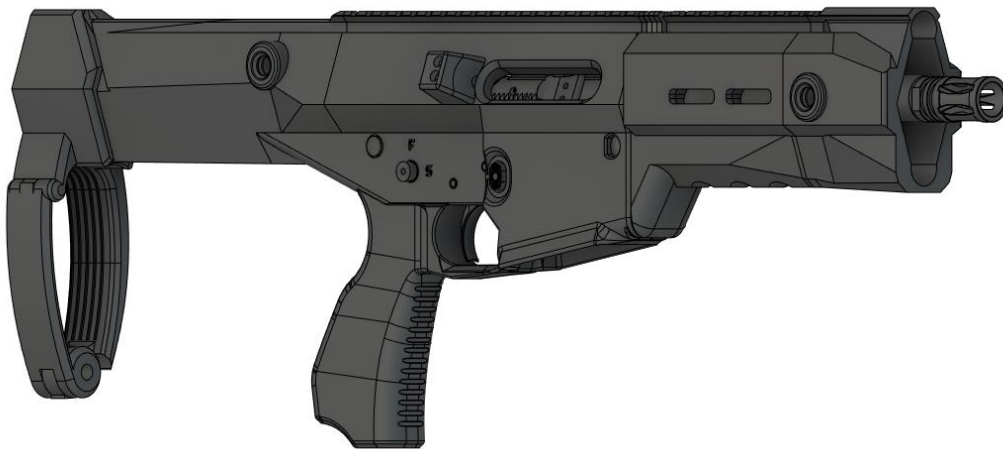
≡ESCAPE YOUR EXILE≡



**Invader Zip** created *Project Ark2.0* to help further 3D2A innovation with the use of a tri-material design. This project was an attempt to reliably fire rifle calibers from a **MOSTLY** 3D printed firearm in hopes to initiate a potential expansion in platforms for our 3D2A community.

**CLICK TO BUY**

## ARK2.0 HARDWARE KIT



**AR15 Barrel**

**AR15 Bolt Carrier Group**

**AR15 Lower Parts Kit**

**AR15 Buffer Weight/Spring**

**AR15 Gas Block/Gas Tube**

**AR15 0.004" Barrel Nut Shim**

**RIPTIDE/GIBBZ Charging Handle**

**JOE BOB/GIBBZ Enhanced Cam Pin**

**ARK2.0 Hardware Kit**





## SLICING

**Recommended slicer** ----- Ultimaker Cura ----- <https://ultimaker.com/software/ultimaker-cura>

**Set Machine XY profile to 237x237 minimum** ----- [https://www.youtube.com/watch?v=D02sVz1\\_e8g](https://www.youtube.com/watch?v=D02sVz1_e8g)

**Print Quality** ----- Layer height of 0.2mm or less ----- Nozzle size of 0.4mm-0.6mm

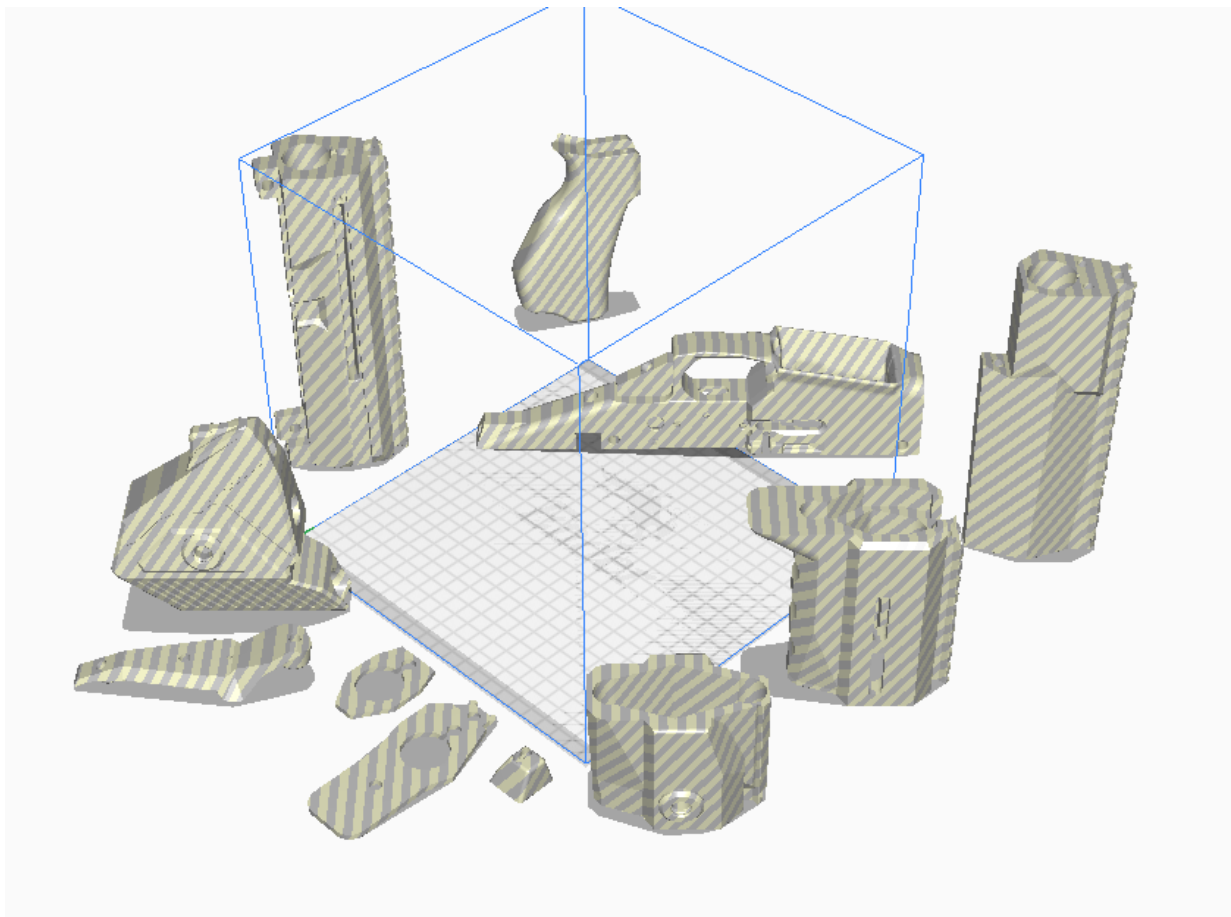
**Walls/Infill** ----- Wall setting of 999 -----OR----- Infill setting of 100% ----- **ALL PARTS MUST BE SOLID**

**Supports** ----- Tree supports, and use of support blockers are recommended.

**Build Plate Adhesion** ----- Brim or Raft may be used to prevent warping.

**Tested Materials** ----- PLA+ ----- CF Nylon

## PRINT ORIENTATIONS





# ALL-THREAD CUTTING GUIDE

ARK2.0			
1/4-20 ALL-THREAD CUTTING GUIDE			
HANDGUARD LENGTHS	TOP ROD LENGTH	BOTTOM ROD LENGTH	BUFFER ROD LENGTH
7	21	7	7
8	22	8	7
9	23	9	7
10	24	10	7
11	25	11	7
12	26	12	7
13	27	13	7
14	28	14	7
15	29	15	7
16	30	16	7

## HARDWARE LIST (McMasterCarr Part Numbers)

- PTFE Tubing  
(cut to gas tube length)  
**5033K32**
- 1/4-20 Binding Barrel  
(4 pieces)  
**90835A666**
- 1/4-20 Square Nut  
(2 pieces)  
**94855A127**
- M5x20mm Bolt  
(2 Pieces)  
**91274A131**
- M3x20mm Socket Head Bolt  
(2 Pieces)  
**91292A123**
- 1/4-20 All-Thread  
**SEE GUIDE ABOVE  
GENERIC**
- M5 Heatset Insert  
(2 pieces)  
**GENERIC, 6mm OD MAX**
- 1/4-20 Hex Nut  
(2 Pieces)  
**GENERIC**
- Mild Steel Plates  
[www.sendcutsend.com](http://www.sendcutsend.com)





ESCAPE YOUR EXILE

# HOW TO ORDER PLATES FROM [WWW.SENDCUTSEND.COM](http://WWW.SENDCUTSEND.COM)

1. Go to [www.sendcutsend.com](http://www.sendcutsend.com)

 SendCutSend

sendcutsend.com > home

1 month ago - SendCutSend is an online CNC and laser cutting service, specializing in aluminum, steel, brass, plastics, titanium, and more. Fast turnaround and free shipping!

#### Contact

SendCutSend is an online laser cutting service that offers speed, quality, and...

#### Bending & Forming

Our CNC sheet metal bending services are here to turn your 2D project into a 3D part...

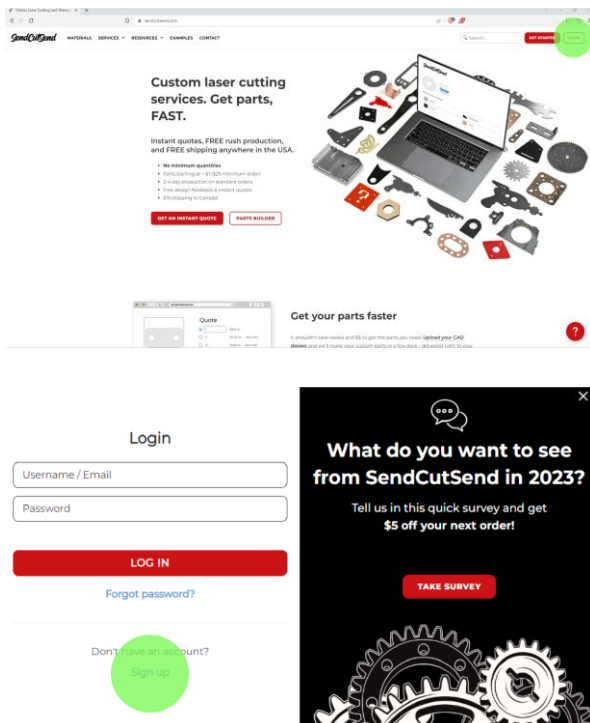
#### Materials

Shop a wide variety of available laser cutting materials, upload your file & we'll ship you...

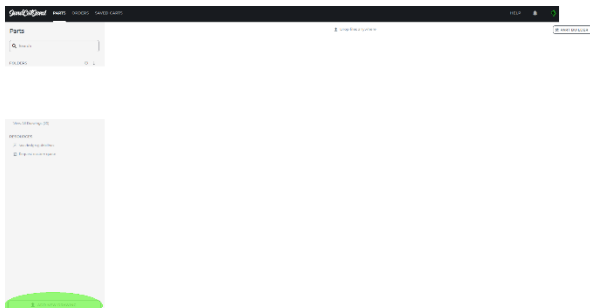
#### Examples

Explore some of SendCutSend's online laser cutting projects, whether you need...

2. Click **LOGIN** on the top right corner and **SIGN UP**.



3. Click **ADD NEW DRAWING** at the bottom left.



4. ARK2.0 FINAL >> ! \_ ! >> Send Cut Send DXF Files

a. If you plan on purchasing an

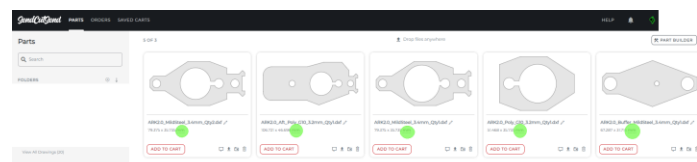
**ARK2.0 Hardware Kit** you can skip past this section.

b. If you *can* print **nylon** you will only need to upload 3 files titled ARK2.0\_MildSteel\_xxx.

c. If you *cannot* print **nylon** you will need to upload the same 3 files above, **AND** 2 files titled ARK2.0\_Poly\_G10\_xxx.

This PC > Desktop > ARK2.0 FINAL > ! _ ! > Send Cut Send DXF Files				
folder				
Name	Date modified	Type	Size	
ARK2.0_Aft_Poly_G10_3.2mm_Qty1.dxf	11/25/2022 12:48 PM	DXF File	5 KB	
ARK2.0_Buffer_MildSteel_3.4mm_Qty1.dxf	11/25/2022 12:51 PM	DXF File	4 KB	
ARK2.0_MildSteel_3.4mm_Qty1.dxf	11/25/2022 12:50 PM	DXF File	5 KB	
ARK2.0_MildSteel_3.4mm_Qty2.dxf	11/25/2022 12:50 PM	DXF File	5 KB	
ARK2.0_Poly_G10_3.2mm_Qty1.dxf	11/25/2022 12:46 PM	DXF File	3 KB	

5. Make sure all parts are set to millimeters!  
Mistakes have been/will be made.



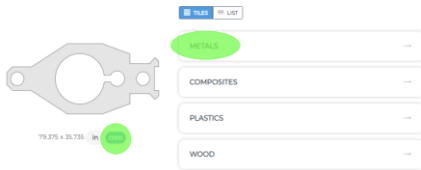
[invaderzip@protonmail.com](mailto:invaderzip@protonmail.com)

(575) 283-0420

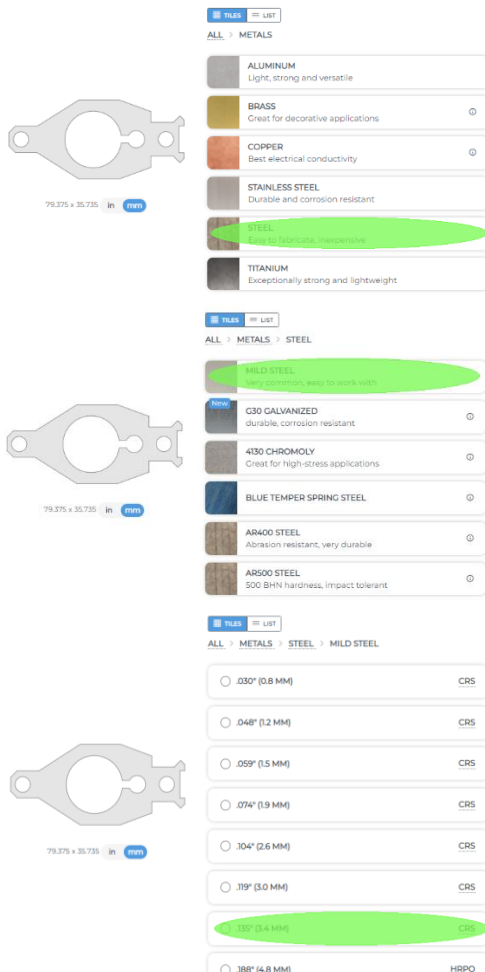
# HOW TO ORDER PLATES FROM [WWW.SENDCUTSEND.COM](http://WWW.SENDCUTSEND.COM)

6. Add each plate to the cart one by one.  
Pay attention to each of the part names  
( ARK2.0 **MaterialType** **Thickness** **Quantity**.dxf )  
Repeat this process for all plates you need;  
Mild Steel and G10.

a. Choose **METALS**








b. Choose **STEEL>MILD STEEL>3.4MM**



7. Your order should total at **\$42.70** with free shipping.

## Order Summary

	CRS Mild Steel (.135") 79.375 x 35.735 mm ARK2.0_MildSteel_3.4mm_Qty2.dxf	Qty: 2
Item total: <b>\$6.38</b>		
	CRS Mild Steel (.135") 79.375 x 35.735 mm ARK2.0_MildSteel_3.4mm_Qty1.dxf	Qty: 1
Item total: <b>\$4.31</b>		
	CRS Mild Steel (.135") 67.287 x 31.716 mm ARK2.0_Buffer_MildSteel_3.4mm_Qty1.dxf	Qty: 1
Item total: <b>\$4.63</b>		
	G10 Black fiberglass (.125") 51.468 x 35.735 mm ARK2.0_Poly_G10_3.2mm_Qty1.dxf	Qty: 1
Item total: <b>\$9.65</b>		
	G10 Black fiberglass (.125") 106.721 x 46.698 mm ARK2.0_Alt_Poly_G10_3.2mm_Qty1.dxf	Qty: 1
Item total: <b>\$14.64</b>		
Subtotal: <b>\$39.91</b>		
Shipping: <b>FREE</b>		
Tax: <b>2.79</b>		
Total: <b>\$42.70</b>		

[Back to Shipping Method](#)

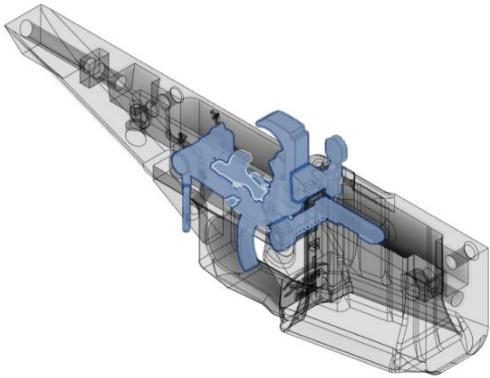
**PLACE YOUR ORDER**

END OF  
SEND CUT SEND  
TUTORIAL

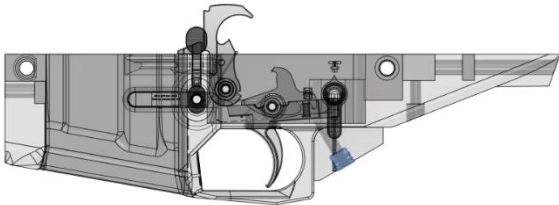


## ASSEMBLY

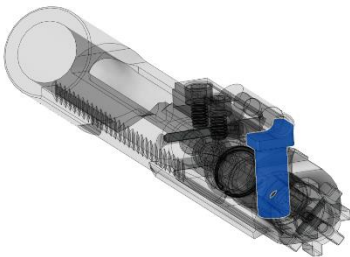
1. Install AR15 Lower Parts Kit in your lower receiver.



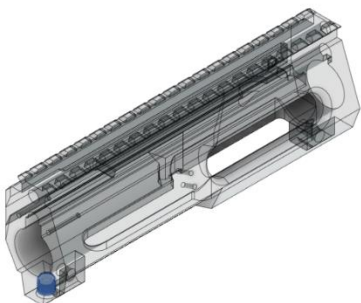
2. Install a M5 heat-set insert for the grip screw.



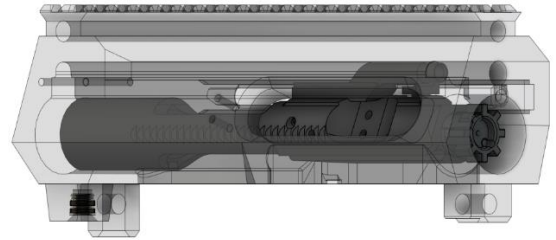
3. Make sure your Enhanced Cam Pin is installed in the BCG before installing the BCG into the Upper Receiver.



4. Install a M5 heat-set insert in the bottom of the upper.



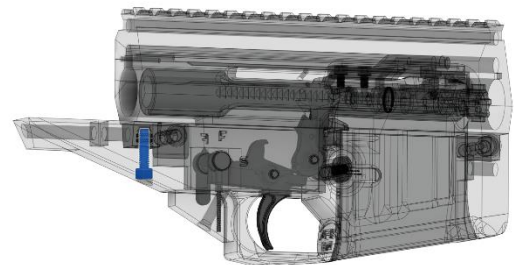
5. Install BCG in Upper Receiver.



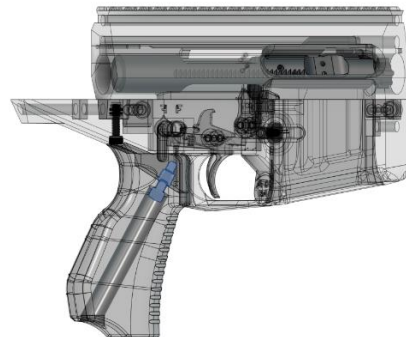
6. Install Upper Receiver to Lower Receiver and secure with both takedown pins. No detents/springs required.



7. Install M5x20 Socket Head Bolt behind grip screw location to secure the Upper to the Lower Receiver.



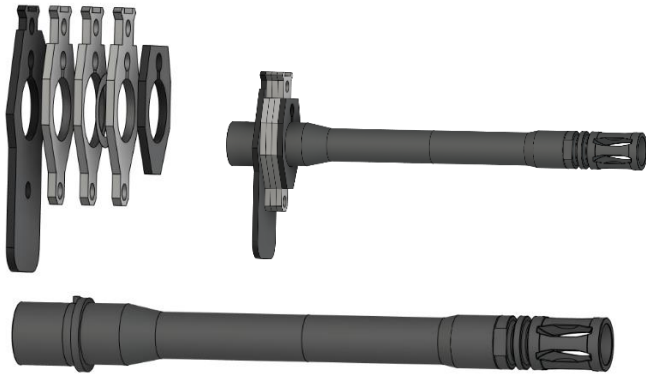
8. Install grip with a M5x20 Socket Head Bolt.



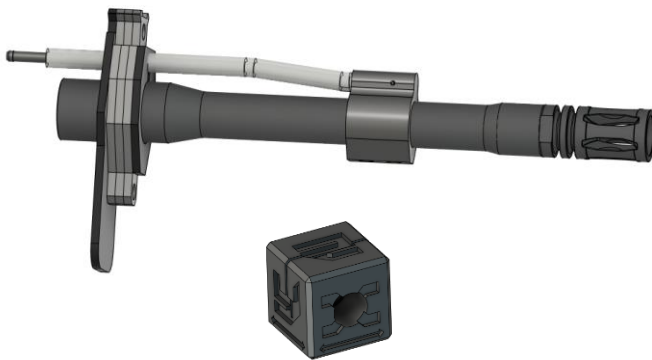
## ASSEMBLY

9. Prior to installing all 5 of your plates, you must sand all faces/edges FLAT and ream the gas tube holes with a 21/64<sup>th</sup> drill bit (5/16<sup>th</sup> will work in a pinch but will be tight during installation).

- Install 5 plates and a 0.004" barrel nut shim in the following order back to front:
  - Larger Nylon/G10 Plate
  - Smaller center hole Steel Plate
  - Larger center hole Steel Plate
  - 0.004" Barrel Nut Shim
  - Smaller center hole Steel Plate
  - Smaller Nylon/G10 Plate



10. Install the gas block and tube assembly to the barrel. Slide the pre-cut PTFE tube over the gas tube until it sits flush against the gas block. Use the PTFE Calibration Cube Cutter provided.



11. Install Barrel assembly to Upper/Lower Receivers.



12. Install 1/4-20 all thread through the SCS plates at the bottom hole. Secure with a 1/4-20 square nut from inside the magwell, and a 1/4-20 hex nut tightened against the outermost steel plate.

- Make sure the rod is not protruding into your magwell as this will prevent you from inserting a magazine later.



13. Install two M3 Socket Head Bolts at the back of the upper Receiver to assist with alignment when installing the Buffer Tube. Maximum length is M3x35. Also install a 1/4-20 square nut in the back of the Lower Receiver.





## ASSEMBLY

14. Install the Buffer Weight, Buffer Spring, and Buffer Tube to the backside of the Upper/Lower Receiver assembly. Install final SCS Steel Plate behind the Buffer Tube.



15. Tighten one ¼-20 Binding Barrel to the 7" long ¼-20 all thread as tight as possible.



16. Install the 7" piece of all thread through your choice of Brace or Stock and **LIGHTLY** tighten to the Square Nut nested inside the Lower Receiver.



17. Tighten another ¼-20 Binding Barrel to the longest ¼-20 all thread as tight as possible.



18. Install the longest piece of all thread through the top of your Brace or Stock and **LIGHTLY** tighten to the Hex Nut against the furthest forward SCS Steel Plate.



19. Now retighten **ALL** your ¼-20 pieces of all thread.

**Top Rod:** Tighten by holding the front Hex Nut stationary while simultaneously turning the Binding Barrel at the back of the firearm. Once it becomes too difficult to tighten, switch and turn the Hex Nut while keeping the Binding Barrel stationary.

**Bottom Rod:** Tighten by threading by hand into the Square Nut. Use your finger to feel when the rod is flush inside the magwell. If the rod is protruding, you will not be able to properly seat a magazine later. Once flush, hold the rod stationary with a pair of pliers and turn the Hex Nut. Make sure to double check the magwell in case the rod began protruding.

**Buffer Tube Rod:** Make it tight, nothing fancy.

## ASSEMBLY

20. Finally, slide your Handguard over the 2 protruding rods and secure with two ¼-20 Binding Barrels.

If your rods are cut too long and you cannot properly tighten your handguard:

- Print the necessary thickness Binding Barrel Spacers and install over the Binding Barrel.
- Remove, remeasure, and recut your rods to the correct length. Refer to 'All Thread Cutting Guide' document included in the release .zip

21. Optional: Install the deflector with two M3x20 Socket Head Bolts.

