

Experience Level required:



## Duplex Designs' Ghost In The Shell Skinny Man's UZI

### Introduction

At Duplex Designs we do love a great sci-fi weapon. Although our favourite has got to be Deckard's blaster from the movie Blade Runner the weapons seen in the live action movie Ghost in The Shell really stood out as well.

This model is of the shrouded Mini UZI used by the Skinny Man / Garbage Man.

According to Weta artist William Bennet in his concept artwork, this UZI looks to be designed as a recyclable shop'n'drop weapon. The Japanese recycling stencils back up this concept.

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 interesting enough to warrant its creation here in 2026.

### Why This Model Was Created

We have not seen another model of this weapon.

Based on actual IMI Mini UZI dimensions this model is pretty accurate to the available stunt prop photos.

We have also elected to fit an entire high detail, high part count Mini UZI inside the 'recyclable' shrouds. While not containing all of the real Mini UZI parts it is a reasonably accurate model modified to suit FDM printing.

(We include a solid model split into five parts as well in case you decide to take an even easier build route. This still retains the high level of detail externally.)

Also included are the folding stock and retainer pin and an alternative ported barrel. These are not seen in the movie but will allow you to build a full Mini UZI rather than the movie prop.

### Project Skill Level Required

You will need a medium level of skill in 3D printing and modelling to do justice to this model.

Part tolerances are quite tight so depending on what you create the parts with you may need to do some sanding and finishing to get parts to fit.

For example, FDM printing at 0.08mm layer height using a 0.4mm nozzle is good enough for a great fit for the assembly but as soon as you start to use resin parts the differences in resin shrinkage and tolerance will start to show.

**NOTE: Although the model contains lots of detailed parts it should *not* be expected that final build will perform all the mechanical actions expected of the real weapon.**

Please consider this a static model. Yes, you can field strip and rebuild this similar to the Mini UZI and the bolt will retract but this is recommended for display purposes only.

Springs can be used on the trigger, top cover release catch, barrel release catch and grip safety. We decided not to add a spring to the bolt although this can still be cocked backwards and forwards.

The magazine catch has been redesigned to allow for a simple spring rather than the original UZI spring.

Finished shrouds require painted graphics. Stencils have been provided as SVG in case you have the ability to laser cut vinyl stencils or use the STL stencils to print a thin stencil for painting graphics. An airbrush is recommended for painting these graphics.

## Build Options

Although most of the Mini UZI will be hidden by the shrouds, we have elected to provide a high detail Mini UZI for fitting inside.

Shrouds are provided as left front, right front, left rear and right rear quarters and each front and rear half are glued together using the provided pins. The two halves are then screwed together, using suitable screws, once the Mini UZI has been placed inside. Shrouds have 4mm holes only on one side for screws to hold the shell together, the other side only has small pilot holes. These screws have not been defined so you can just use whatever suits you. You may need to drill suitable holes in the side that contains only pilot holes, but screws should have a head diameter of at least 6mm and a length of 12mm maximum.

See Hardware Required section for suitable shroud fixing screws.

### Solid UZI + Shrouds

Shroud side halves are glued together using the supplied pins. A solid Mini UZI model is included that is split into five parts for easy FDM printing. This consists of front left and right parts, rear left and right parts and a final rear end containing the (unused) folding stock hinges. All parts can be glued together using the pegs provided. Use Cocking Lever instead of Cocking Knob on this build.

### Detailed UZI + Shrouds

Shroud side halves are glued together using the supplied pins. A more detailed UZI can be constructed using multiple parts that attempt to conform, where possible, to actual Mini UZI construction methods. This UZI model has moving parts such as trigger and magazine. Use Cocking Lever instead of Cocking Knob on this build.

*NOTE: You could omit all of the springs apart from Trigger Spring if you did not want moving parts inside the shrouds.*

### Solid UZI No Shrouds

If you just wanted a Mini UZI model you can print the solid UZI model and add the included Cocking Knob, Folding Stock and Retaining Pin. Although consisting of few parts this is still a high detail representation of the Mini UZI.

### Detailed UZI No Shrouds

A complete Mini UZI can also be created from the detailed parts. Just add the included Cocking Knob, Folding Stock and Retaining Pin. Also supplied is a ported barrel which may be used on this model. The magazine can hold three dummy rounds and contains a small 3D printed spring to allow rounds to compress slightly up against the bolt as the magazine is inserted.

## Build Material Choices

### FDM Printer

We have had good results with at 0.08mm layer height using a 0.4mm nozzle using PLA and the parts fit is excellent.

It is also noted that larger parts such as the frame, slide and grip, may well exhibit VFA or ghosting which will require extra sanding and polishing.

### Resin Printer












Not really suitable for the larger parts but smaller parts would benefit from the higher resolution.

Resin is quite unpredictable when it comes to shrinkage or indeed expansion and is very dependent on the resin used, cure times and how well the model has been sliced and supported so when it comes to larger items you may find a lot of sanding and finishing is required for a good fit of parts.

## Hardware Required

The only parts that cannot be 3D printed are the springs. (Magazine Spring and Rear Sight Spring being the exception).

The grip and handguard nuts and bolt are rather unique so these can be 3D printed or you could substitute with real hardware as described below.

<b>Barrel Catch Spring</b> 	2.5mm diameter, 8mm length
<b>Trigger Spring</b> 	4mm diameter, 10mm length
<b>Cover Catch Spring</b> 	4mm diameter, 25mm length
<b>Magazine Catch Spring</b> 	6mm diameter, 10mm length
<b>Grip Safety Spring</b> 	8mm diameter, 20mm length
<b>Stock Spring</b> 	8mm diameter, 25mm length
<b>Handguard Bolt</b> 	Slot Head M3.5 x 33mm (X2) Can be cut down length of M3.5 X 35mm bolt. Nuts would ideally be slotted round nuts. 3D printed parts have been included.
<b>Grip Bolt</b> 	Slot Head M3 x 27mm (X2) Can be cut down length of M3 X 30mm bolt. Nuts would ideally be slotted round nuts. 3D printed parts have been included.
<b>Cocking Knob Screw</b> 	Slot Head M4 X 15mm Threaded into Cocking Knob and Slot Cover Plate but locates into hole on top of bolt when Receiver Cover is fitted to top of Receiver.
<b>Stock Retaining Ring</b> 	Circlip 4mm inside diameter Optional if building complete UZI with stock.
<b>Shroud Screws</b> 	Min head diameter 6mm. Max length 12mm. Self tapping screws.



## Parts List

### Shroud Parts

**Shroud parts if you are building the Skinny Man UZI.**

Following is a list of STL model parts along with notes. ( **ALT** = There are alternative parts that can be used.)

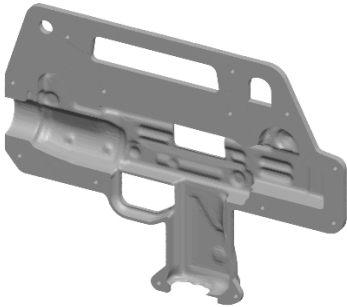


#### **Shroud Left**

Complete left shroud for those with a printer large enough to handle it. Use the shroud parts and pins for smaller printers.

Print X 1 **ALT**

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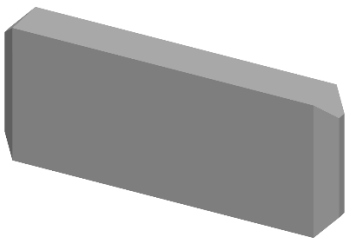


#### **Shroud Right**

Complete right shroud for those with a printer large enough to handle it. Use the shroud parts and pins for smaller printers.

Print X 1 **ALT**

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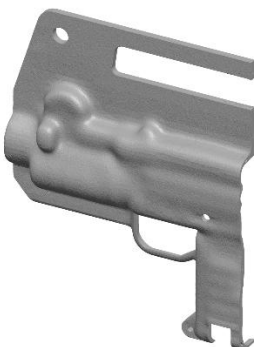


#### **Shroud Pin**

If you are building the shrouds from multiple parts use these pins to secure and align parts.

Print X 15

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#### **Shroud Left Front**

Shroud part for smaller printers. Use pins to secure and align using glue.

Print X 1 **ALT**

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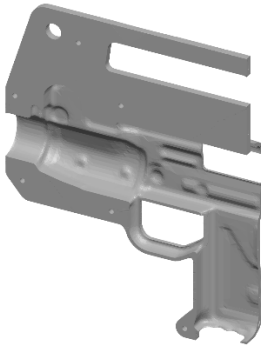


**Shroud Left Rear**

Shroud part for smaller printers. Use pins to secure and align using glue.

Print X 1 **ALT**

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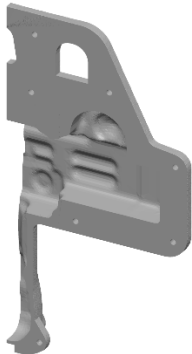


**Shroud Right Front**

Shroud part for smaller printers. Use pins to secure and align using glue.

Print X 1 **ALT**

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**Shroud Right Rear**

Shroud part for smaller printers. Use pins to secure and align using glue.

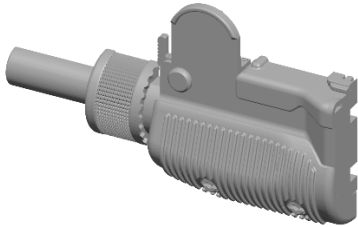
Print X 1 **ALT**

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## Solid Mini UZI Parts

**Simple solid UZI can be used standalone or to place inside shrouds for Skinny Man UZI.**

Following is a list of STL model parts along with notes. (**ALT** = There are alternative or optional parts that can be used.)

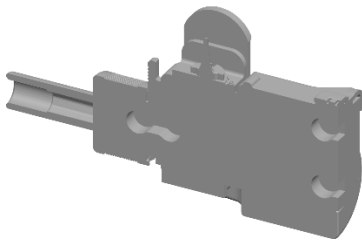


### **Mini UZI Front Left**

Easy build solid UZI with only five parts + pegs.  
Print flat onto build plate.

Print X 1

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### **Mini UZI Front Right**

Easy build solid UZI with only five parts + pegs.  
Print flat onto build plate.

Print X 1

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### **Mini UZI Rear Left**

Easy build solid UZI with only five parts + pegs.  
Print flat onto build plate.

Print X 15

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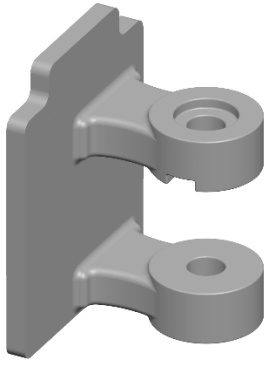


### **Mini UZI Rear Right**

Easy build solid UZI with only five parts + pegs.  
Print flat onto build plate.

Print X 1

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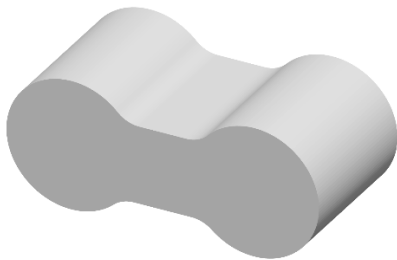


**Rear**

Easy build solid UZI with only five parts + pegs.  
Print flat onto build plate.

Print X 1

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**UZI Peg**

Print with 100% infill.

Print X 5

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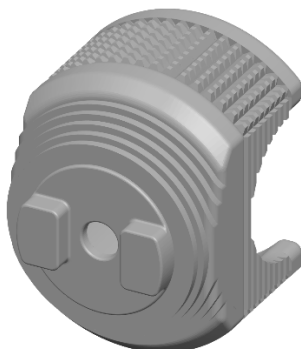
**Cocking Lever**

Used instead of the Cocking Knob when building the Skinny Man UZI.  
Print with 100% infill.

Print X 1

**ALT**

---



**Cocking Knob**

Use instead of Cocking Lever if you are building a standalone UZI.  
Print with 100% infill.

Print X 1

**ALT**

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**Folding Stock**

Used if building a standalone UZI.  
Print with 100% infill.

Print X 1 **ALT**

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**Connecting Pin**

Used if building a standalone UZI.  
Print with 100% infill horizontally.

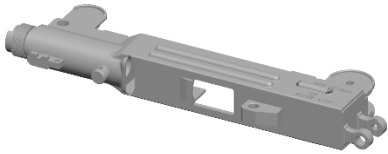
Print X 1 **ALT**

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## Detailed Mini UZI Parts

**Detailed UZI can be used standalone or to place inside shrouds for Skinny Man UZI.**

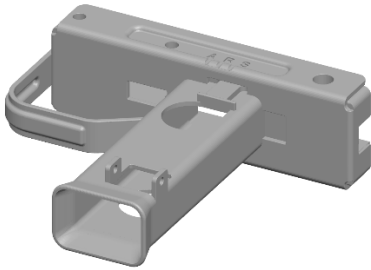
Following is a list of STL model parts along with notes. (**ALT** = There are alternative or optional parts that can be used.)



**Receiver**

Print X 1

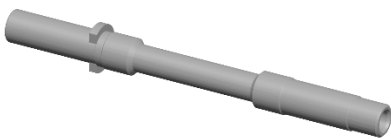
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**Pistol Grip Body**

Print X 1

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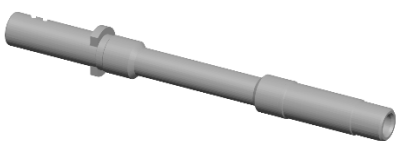


**Barrel**

Use this barrel for Skinny Man UZI. There were no ports on the screen used UZI.

Print X 15 **ALT**

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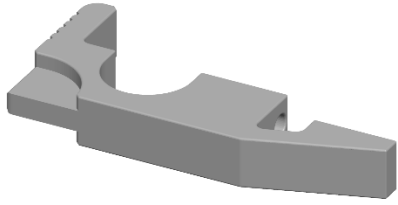


**Barrel Ported**

Alternative ported barrel to use if you are building a standalone UZI.

Print X 1 **ALT**

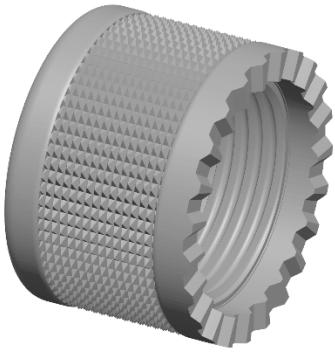
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**Barrel Retaining Catch**

Print X 1

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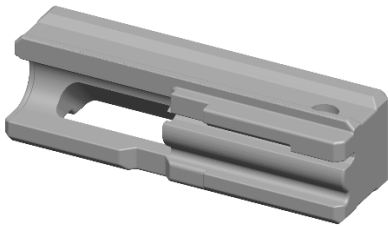


**Barrel Retaining Nut**

Print flat face down and use support blocker to stop threads being supported.

Print X 5

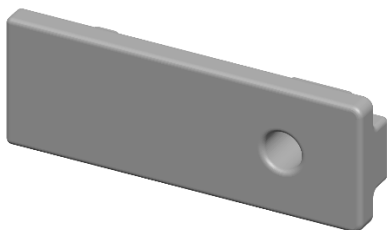
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**Bolt**

Print X 1

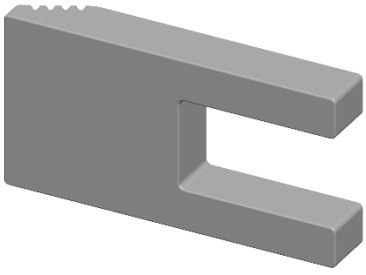
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**Cocking Lug**

Print X 1

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**Cover Catch**

Print X 1

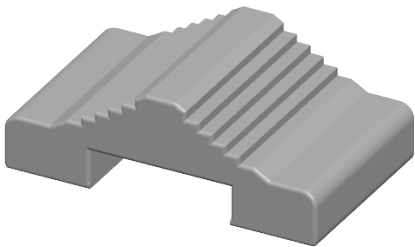
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**Extractor Pin**

Print X 1

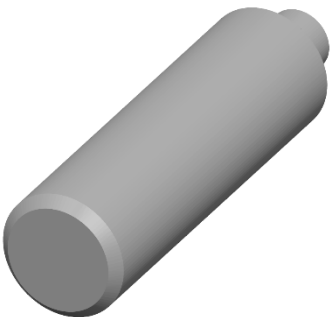
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**Fire Selector Button**

Print X 1

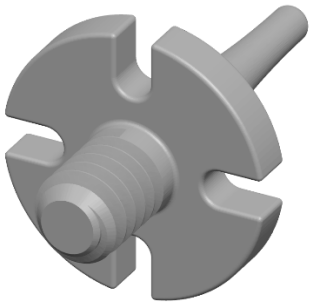
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**Front Sight Detent**

Print X 1

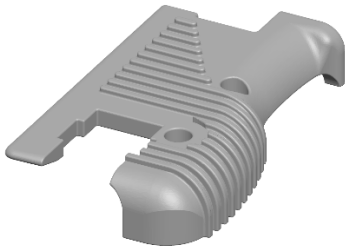
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**Front Sight**

Print X 1

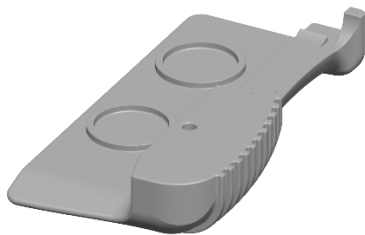
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**Grip Left**

Print X 1

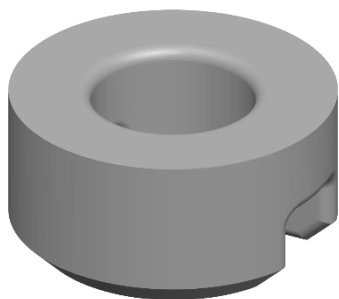
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**Grip right**

Print X 1

---

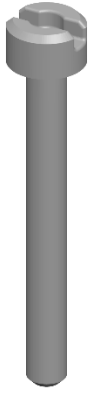


**Grip Nut**

Use this part if you are not using real hardware.

Print X 2 **ALT**

---

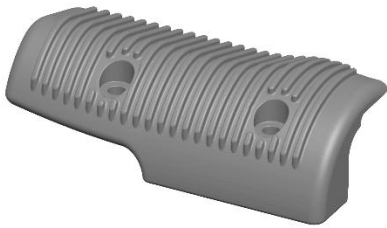


### Grip Bolt

Use this part if you are not using real hardware.

Print X 2 **ALT**

---



### Handguard Left

Print X 1

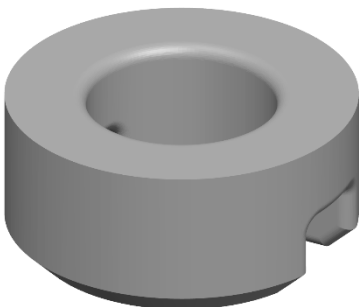
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### Handguard Right

Print X 1

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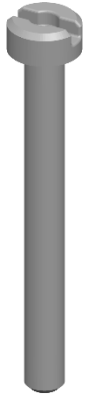


### Handguard Nut

Use this part if you are not using real hardware.

Print X 1 **ALT**

---

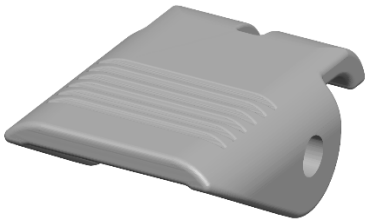


### Handguard Bolt

Use this part if you are not using real hardware.

Print X 2 **ALT**

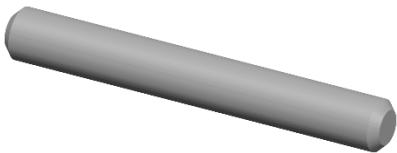
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### Magazine Catch

Print X 1

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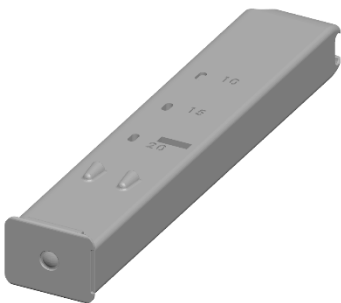


### Magazine Catch Pin

Print with 100% infill horizontally.

Print X 1

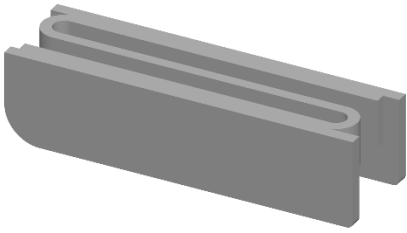
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### Magazine

Print X 1

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**Magazine Spring**

Use this if you intend to place dummy rounds in the magazine.  
Print with 100% infill.

Print X 1 **ALT**

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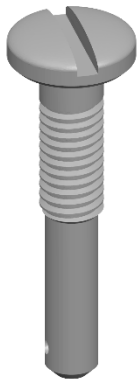


**Pistol Grip Pin**

Print with 100% infill horizontally.

Print X 1

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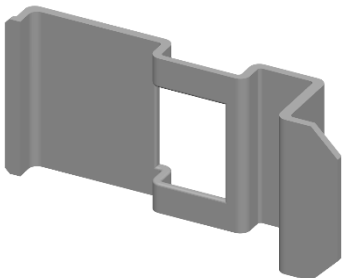


**Rear Sight Axis**

Print with 100% infill horizontally.

Print X 1

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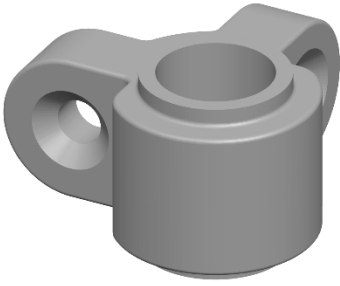


**Rear Sight Spring**

Print with 100% infill.

Print X 1

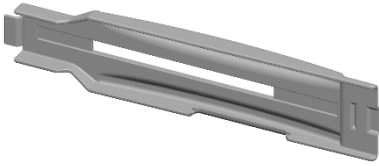
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**Rear Sight**

Print X 1

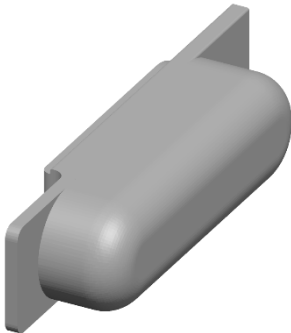
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**Receiver Cover**

Print X 1

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**Safety Grip Button**

Print X 1

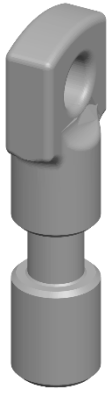
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**Sear Pin**  
Print with 100% infill horizontally.

Print X 1

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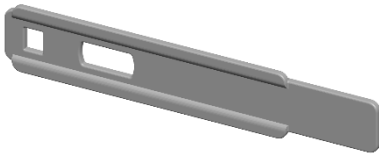


**Sling Swivel**

Print with 100% infill horizontally.

Print X 1

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**Slot Cover Plate**

Print X 1

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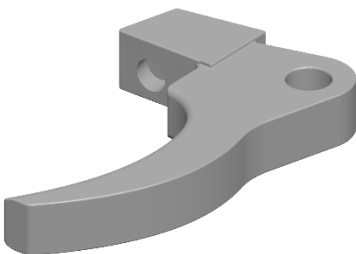


**Trigger Pin**

Print with 100% infill horizontally.

Print X 1

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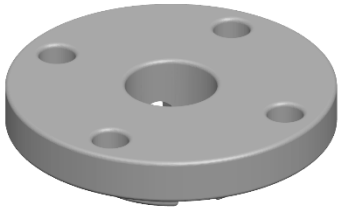


**Trigger**

Print with 100% infill.

Print X 1

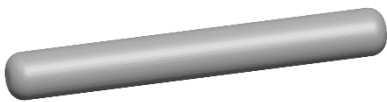
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**Windage Drum**

Print X 1

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**Windage Drum Pin**

Print with 100% infill horizontally.

Print X 1

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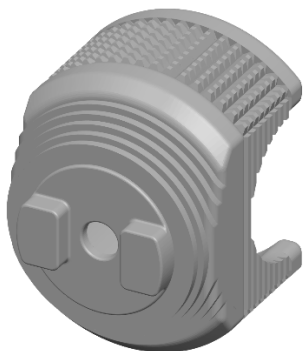
**Cocking Lever**

Used instead of the Cocking Knob when building the Skinny Man UZI.  
Print with 100% infill.

Print X 1

**ALT**

---



**Cocking Knob**

Use instead of Cocking Lever if you are building a standalone UZI.  
Print with 100% infill.

Print X 1

**ALT**

---



**Folding Stock**

Used if building a standalone UZI.  
Print with 100% infill.

Print X 1 **ALT**

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**Connecting Pin**

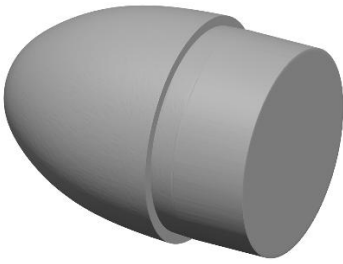
Used if building a standalone UZI.  
Print with 100% infill horizontally.

Print X 1 **ALT**

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## Cartridge Parts

If you are building the detailed Mini UZI you may want to print these dummy rounds to fit into the magazine.



### **9 X 19 Round Bullet**

Bullet to assemble into cartridge for dummy round.

Optional parts to fill magazine but remember these will not be visible.

Print X 3

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### **9 X 19 Round Cartridge**

Cartridge for dummy round.

Print X 3

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### **9 X 19 Round Primer**

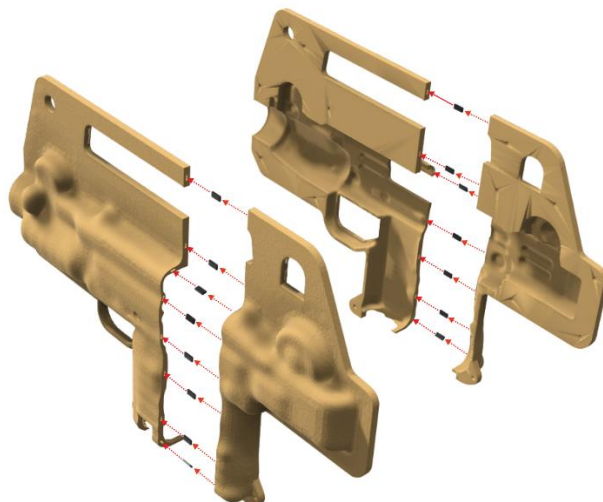
Primer to insert into base of Cartridge.

Print X 3

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## Assembly Sequence

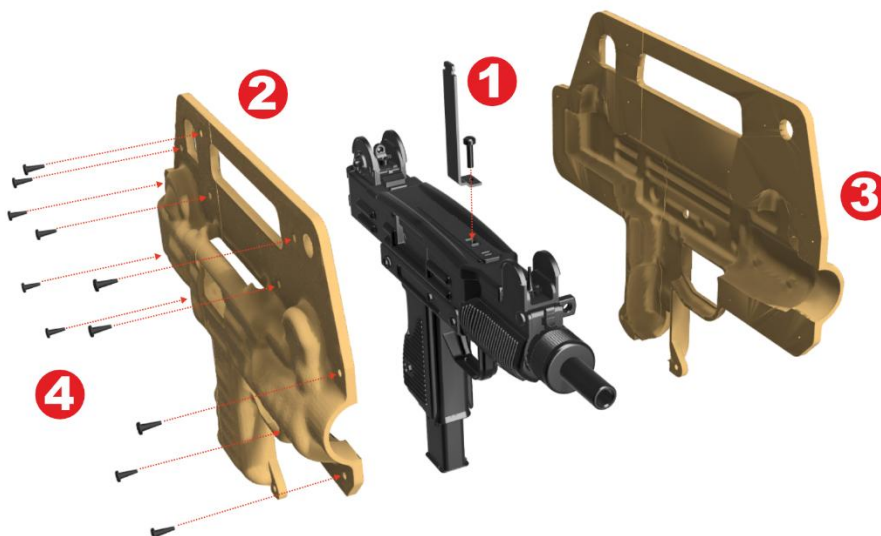
### Shroud Assembly



1. Use the pins to glue together each half of the shroud sides. **Do not glue the two completed shroud halves together!**

### Final Shroud Assembly

The UZI model may be the simple solid or detailed UZI. See next assembly steps for each UZI option.



1. Secure Cocking Lever to the top of the UZI model. If you are using the simple solid UZI then the assembly looks like the above image. If you are assembling the detailed UZI the steps to attach the Cocking Lever are shown in the later assembly steps.
2. Ease the UZI into the right-hand shroud by feeding the Cocking Lever up through the slot. Seat the UZI into the cavity in the shroud.
3. Fit the left-hand shroud over the UZI and align with the right-hand shroud.
4. Secure the two shroud halves with suitable self-tapping screws.

## Simple Solid Mini UZI Assembly

This is the simple option for building the Mini UZI. This assembly can be used with the Skinny Man shrouds or , with further steps, to create a standalone Mini UZI model.

The following steps 1 through 4 should all be completed before glue has a chance to dry.



1. Glue the right-hand front and rear parts of the UZI together but do not let the glue dry as step two is also required.
2. Fit two pegs to hold the right-hand UZI parts together.
3. Glue in the other three pegs.
4. Glue on the left-hand UZI part using the pegs to align.
5. Glue the rear onto the back of the assembled UZI.

## Simple Solid Mini UZI Standalone Option

If you do not want to fit your UZI inside the Skinny Man shrouds you can fit the following parts.



1. Screw the Cocking Knob to the top of the UZI using the Cocking Knob Screw.
2. Insert the Folding Stock into the bracket on the rear of the UZI.
3. Insert Connecting Pin and Stock spring into the hinge from below.
4. Use circlip to secure top of Connecting Pin. If you have trouble attaching a circlip you could try and attach an M5 half nut to the top of the Connecting Pin. Use the nut to cut threads into the top of the pin before assembling.

## Detailed Mini UZI Assembly

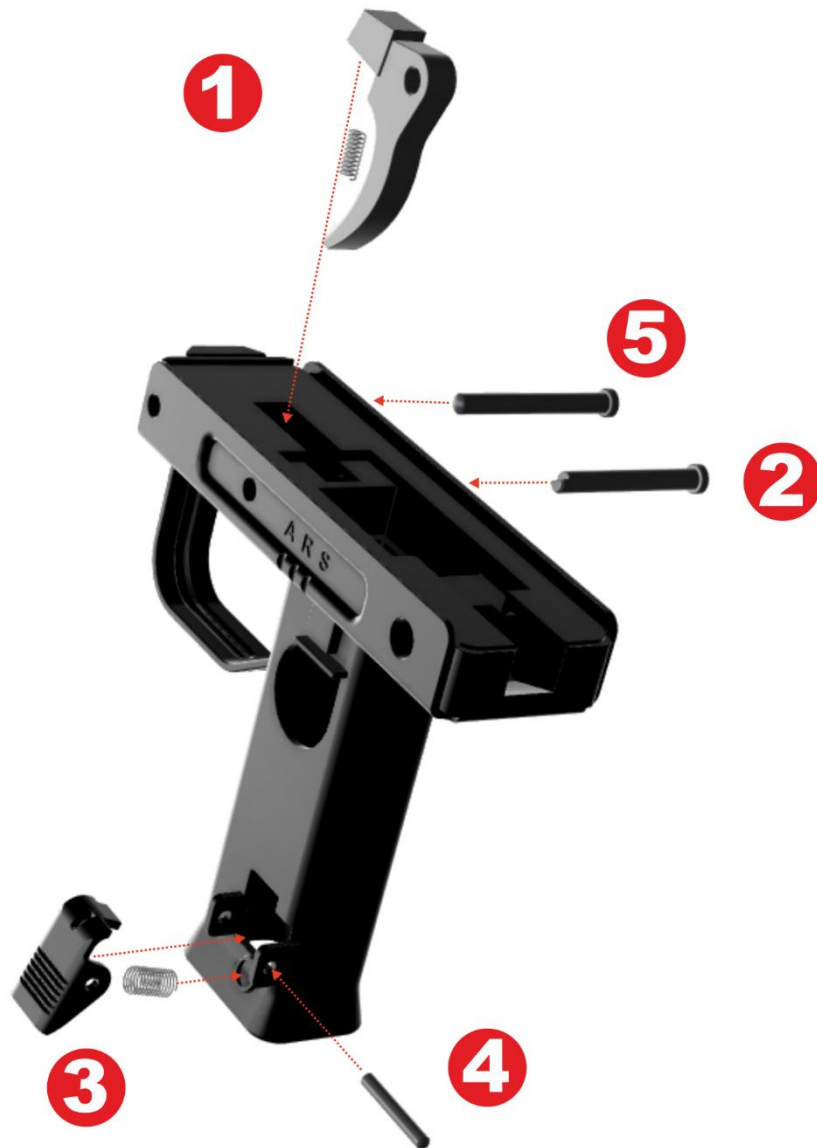
This model consists of multiple parts and adheres closely to original UZI components and assembly but with modifications to allow easier 3D printing.

### Magazine Sub-Assembly



1. Assemble rounds (X3) by fitting bullet and primer to case.
2. Glue Magazine Spring into Magazine. This sits at the lowest level of the aperture in the top of the magazine.
3. Fit all three rounds into the top of the Magazine. First sits above spring, second above that but on the far side of the spring. The final round sits centrally in the lip of the Magazine.

## Pistol Grip Body Sub-Assembly 1



1. Fit the Trigger and Trigger Spring into the top of the Pistol Grip Body.
2. Secure the Trigger with the Trigger Pin.
3. Align the Magazine Catch and Magazine Catch Spring with the holes on the Pistol Grip Body.
4. Secure the Magazine Catch by sliding in the Magazine Catch Pin.
5. Fit the Sear Pin. This has no function other than cosmetic.

## Pistol Grip Body Sub-Assembly 2



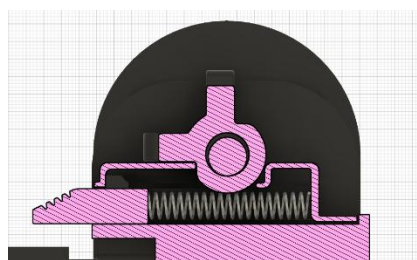
1. Fit Grip Left and Grip Right to the Pistol Grip Body ensuring that the Grip Safety Button and Grip Safety Button Spring are sandwiched in between.
2. Secure the grips with the grip bolts and nuts.
3. Glue Fire Selector Button to the Pistol Grip Body.

## Receiver Assembly 1

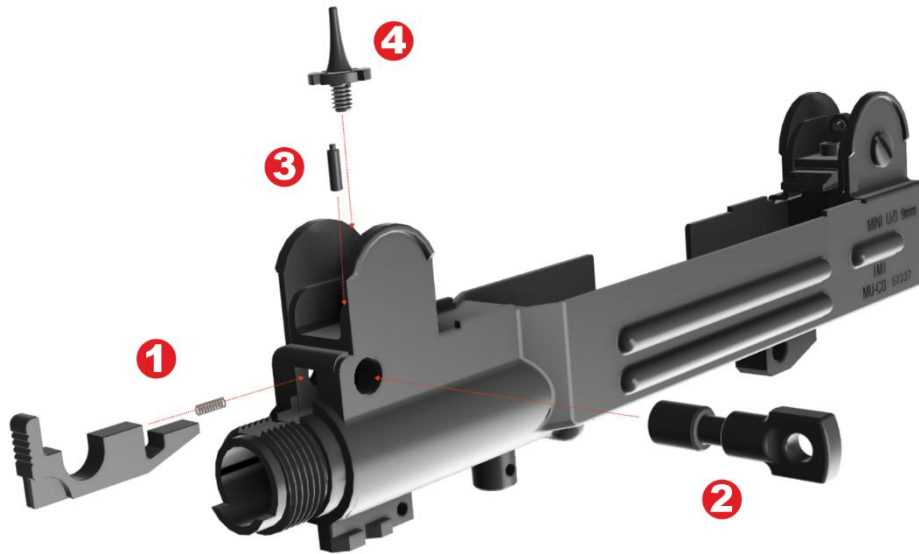


1. Place Cover catch Spring in the cutout in the Cover Catch. Lower this assembly into the top rear of the Receiver.
2. Sit the Rear Sight Spring over the top of the Cover Catch. Ensure that the lip at the front of the rear Sight Spring sits over the raised part of the Cover Catch and the Cover Catch Spring is retained within the rear of the Rear Sight Spring.  
The Rear Sight sits on top of this with hole aligned with holes in the Receiver.
3. Insert the Rear Sight Axis to hold all components together. The Cover Catch should now be able to be pushed in towards the rear and allowed out again under spring pressure whilst being retained by the Rear Sight Spring.
4. Fit the Windage Drum over the end of the Rear Sight Axis and secure with the Windage Drum Pin.

The following sectional image shows how the Cover Catch is held in place by the Rear Sight Spring.

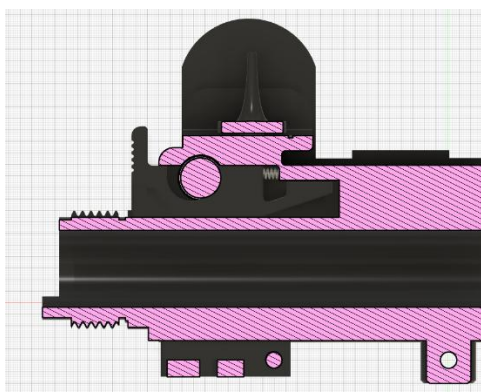


## Receiver Assembly 2



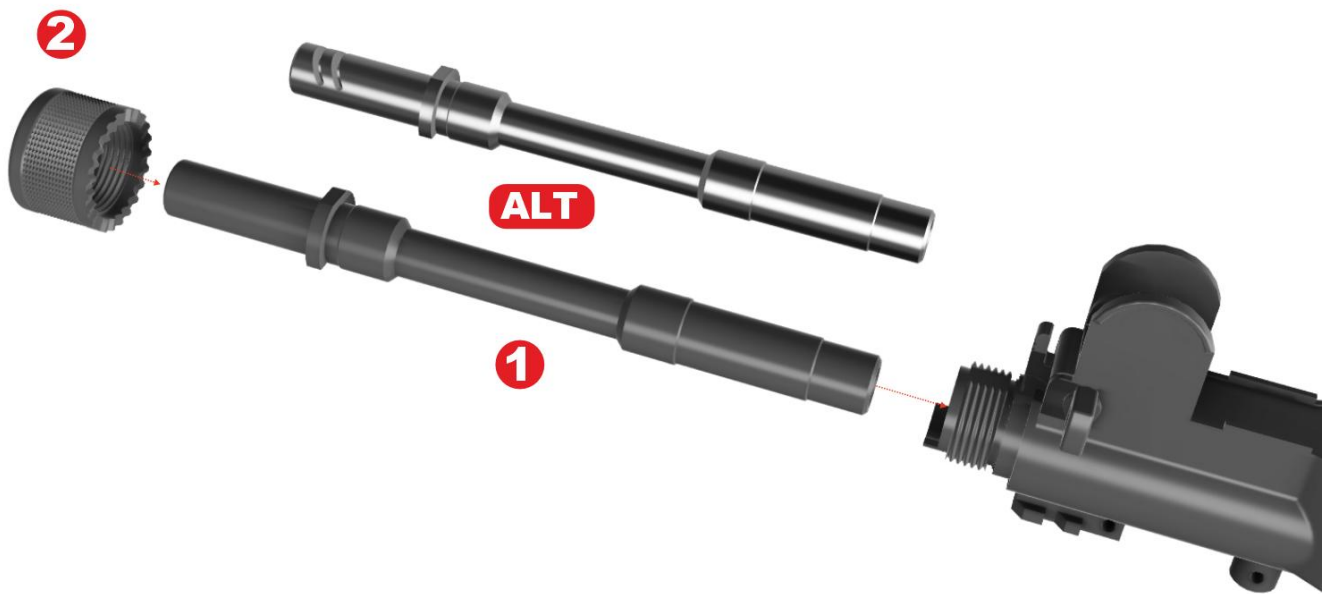
1. Slide the Barrel Catch Spring into the hole in the Barrel Catch and slide this assembly into the front of the Receiver.
2. Whilst pushing the Barrel Catch in as far as it will travel against the spring, insert the Sling Swivel into the hole in the Receiver. Once you let go of the Barrel Catch this should hold the Sling Swivel in place.
3. Insert Front Sight Detent into the small hole in the top of the Receiver.
4. Push the Front Sight into the larger hole in the top of the Receiver. As the hole is not threaded you may need a spot of glue to secure.

The following sectional image shows how the Barrel Catch holds the Sling Swivel in place.



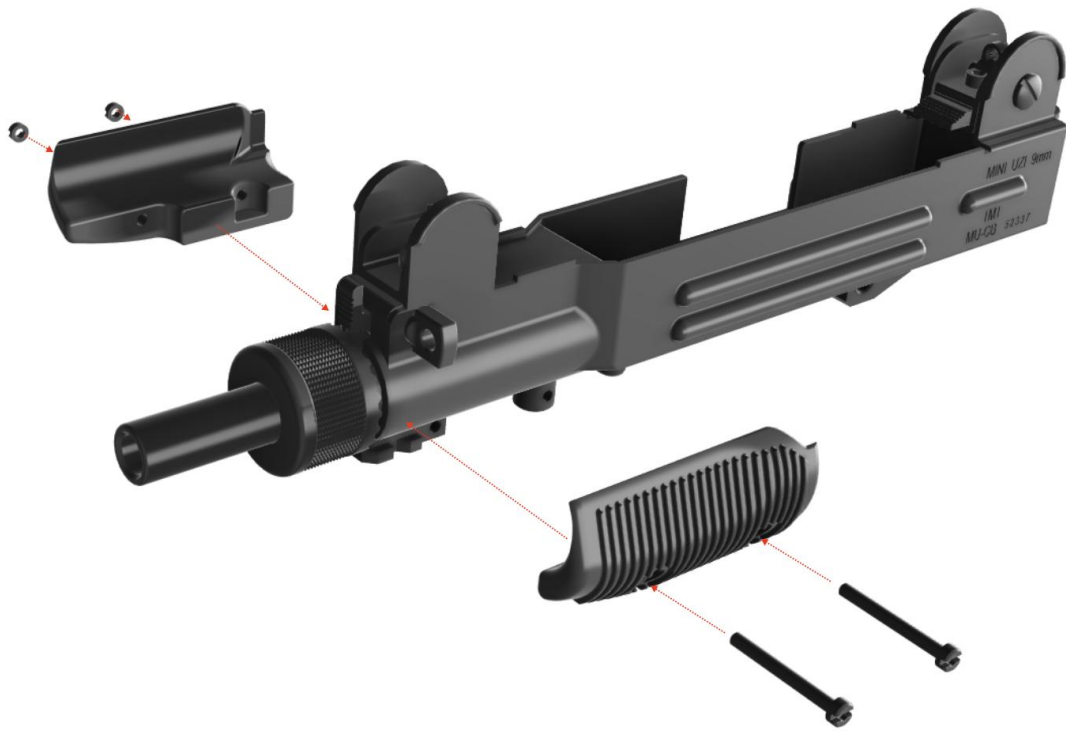


## Barrel Assembly



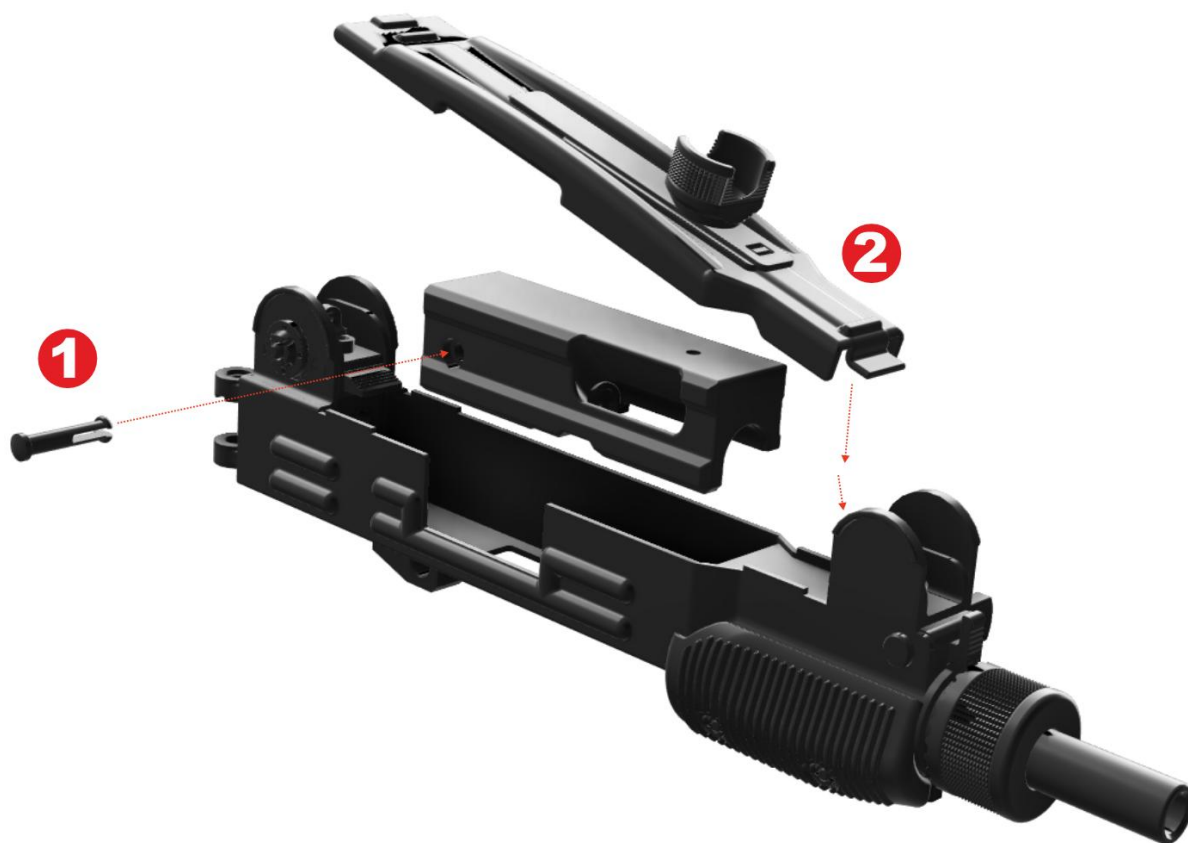
1. **ALT** Choose the Barrel if you are building the Skinny Man UZI or the Ported Barrel if you are building the standalone UZI. Slide the selected barrel into the front of the Receiver. Note orientation where half cut on Barrel aligns with half cut in Receiver.
2. Secure the barrel by screwing on the Barrel Retaining Nut. NOTE: as you finish tightening this hold in the Barrel Catch and find a notch in the Barrel retaining Nut that locates with the Barrel Catch at such a point where the barrel is held in place but so is the Sling Swivel. i.e. the Barrel Catch should still be pushed forward by the spring thus still holding the Sling Swivel in place.

## Handguard Assembly



1. Attach Handguard Left and Handguard Right to the Receiver using either the 3D printed handguard nuts and bolts or the hardware described in the Hardware List.

## Bolt Assembly



1. Push Extractor Pin into Bolt. Slide Bolt into the recess in the top of the Receiver.
2. Fit the Receiver Cover assembly (NOTE: you may have the Cocking Lever fitted instead of the Cocking Knob shown) onto the top of the Receiver by tilting down the front and locating the lip into the recess in the front of the Receiver.

Then lower the rear onto the Receiver but ensure that the Cocking Knob Bolt fits into the hole on the top of the Receiver.

**IMPORTANT:** Slide back the Cover Catch until the Receiver Cover is fully down then slide it back out to lock the Receiver Cover in place.

## Receiver and Pistol Grip Body Assembly



1. Fit the Pistol Grip Body assembly into the Receiver by locating the lip at the front with the recess in the Receiver. Set it flat against the underside of the Receiver.
2. Fit the Pistol Grip Pin through the Pistol Grip Body and the Receiver to lock everything together.

## Final Assembly



1. Fit the magazine.

## Simple Solid Mini UZI Standalone Option

If you do not want to fit your UZI inside the Skinny Man shrouds you can fit the following parts.



1. Cocking Knob should already have been assembled from previous steps.
2. Insert the Folding Stock into the bracket on the rear of the UZI.
3. Insert Connecting Pin and Stock spring into the hinge from below.
4. Use circlip to secure top of Connecting Pin. If you have trouble attaching a circlip you could try and attach an M5 half nut to the top of the Connecting Pin. Use the nut to cut threads into the top of the pin before assembling.

# Gallery

## Ghost In The Shell Movie and Prop Images



Prop Photo Left



Prop Photo Right



Movie Still 1



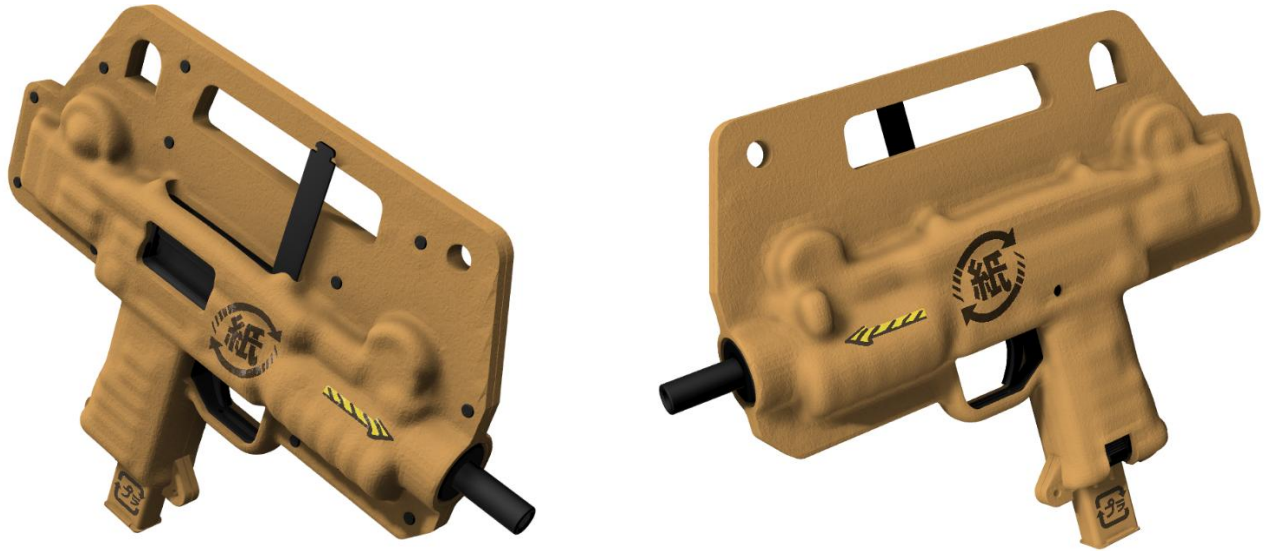
Movie Still 2

## Duplex Designs Model Renders



3D Model Renders Left and Right

## Duplex Designs FDM 3D Printed Model [Coming Soon]



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