

SWMP Assembly Guide

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SECTION I: INTRODUCTION

The SWMP is a frame for the Smith and Wesson M&P 9 and 40 series of pistols.

It's one of the more common (and consistently appearing) part kits out there and doesn't require separate rails. This makes it the ideal candidate for a printed frame.

The SWMP frames also add some variety to the mix. Not only are the standard configurations available (full-size, compact), but also combinations of both are included too: full-size slide and compact grip, along with compact slide and full-size grip.

The frames come undecorated and "plain" for customization by the talented remixers in this space, as well. I have included my own remix, the MMMM&P to show what can be done in terms of ergonomics and appearance.

A release has been long overdue thanks to the complex geometry of the magazine release button pocket. Fortunately, it's been reconciled to require minimal post-processing.

I hope you enjoy this common, but well-endearred, pistol, now in printed form.

Vinh Nguyen

SECTION II: TOOLS AND SHOPPING LIST

To assemble this firearm, you will need the following tools:

- Gunsmithing Punch Set
- Stick Files
- 3.5mm drill bit
- Flathead screwdriver

You can check out a recommended shopping list for tools Vinh keeps at his desk at www.vinhstoolbox.com.

SECTION III: PARTS KIT CHECKLIST

In order to successfully build your SWMP, you will need the following parts that specifically pertain to the firearm.

In this guide, we will be assembling the SWMP-9X, a compact slide with standard grip length, but the steps are the same for all variants of the firearm.

PARTS

A complete parts kit should compose of the following:

- Slide assembly with barrel
- Trigger assembly with trigger bar and trigger return spring
- Slide lock
- 2x pins for the rail blocks
- Trigger pin
- Magazine release and spring
- Front rail block
- Rear rail block
- Ejector
- Takedown lever
- Takedown lever retention spring

MAGAZINES AND ACCESSORIES

Don't forget you will also need:

- Magazine – Be sure to procure one for the particular grip length you are printing.
- Holster (if you intend to carry)



SECTION IV: ASSEMBLY

In this section, we will cover the settings you should print your frame and assembling it.

SAFETY FIRST

Putting a gun together is no joke. Firearms are dangerous tools that must be treated with care and respect. **You are responsible for your safety, and those surrounding you** when you work with or operate firearms. Fellow developers or engineers cannot be responsible or liable for what you do or don't do.

As a general reminder, here are some rules to keep in mind:

1. **Always treat a gun as if it is loaded.** Remove the magazine and check the chamber yourself to verify the gun is unloaded.
2. **Keep your firearm always pointed in a safe direction.** Never point your gun at anything you don't intend to destroy.
3. **Be aware of what is in front and behind of your target.**

But specifically, for working on your firearm, you should remember the following too:

1. **Keep live ammo away.** Use snap caps or dummy rounds to verify function of your firearm. Never keep live ammo around your workspace, and certainly never mix them with your dummy ammo.
2. **A clean gun is a safe gun.** Never leave your firearms uncared for to foul or dirty up. Debris can cause malfunctions, which can be dangerous.
3. **Always read and follow directions.** Don't ignore a warning or follow instructions out of order.
4. **Use prudent judgement.** If something doesn't add up- use common sense. Stop, inspect, and re-evaluate your previous actions and procedures.

PREPERATION



Remove any debris or support material from the frame.

You should use a stick file too to remove any debris from the hole, as well.



Use a 3.5mm drill bit to smooth and chase all the holes.

Take your time to remove debris and round out the holes. A file can help poke out debris, but you must chase and smooth with a 3.5mm drill bit.



Remove debris from the magazine release geometry and test the fitment of the magazine release.

You want to make sure that the button can go in and out smoothly, without friction.

INSTALLING THE MAGAZINE CATCH



Use a stick file to clean the geometry if there is any sagging filament or debris.



Use a 1/16th punch starter to insert the magazine release spring into the hole.



Tap on the punch gently to drive in the spring pin and secure it.



Insert the magazine release button.

Move the spring rearwards towards the back of the frame to have it overcome the “ledge” on the button.



Use a flathead screw-driver to move the spring into the button.



Insert a magazine and see if it fits and locks. Use the magazine release button to remove it.

It should insert without hassle, and drop-free.

INSTALLING THE TRIGGER AND RAIL BLOCKS



Insert the rear rail module into the frame partway.



Place the ejector plate into the rear rail module.

Use a starter punch and hammer to gently impress the rail module deeper into the frame, which will secure the ejector plate.

Finally, secure the rear rail module in place with a pin.



Attach the trigger return spring to the trigger bar.



Insert the trigger into the frame, with the shoe first.



The trigger bar “stem” should slip into the rear rail module.

The M&P trigger works by pivoting the polished sear using the “loop” in the trigger bar. If the “loop” is stuck or won’t freely move, you may have inserted the bar slightly ajar in a way where it binds on the rear rail module.



Place the slide catch on top of the trigger assembly.

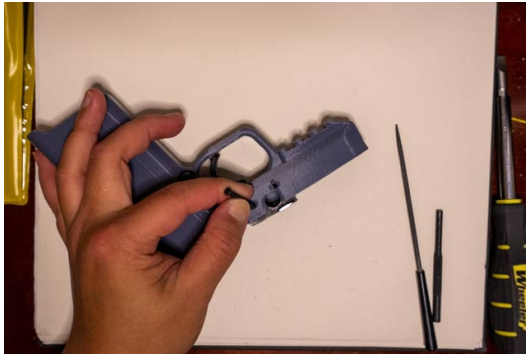


Place the front rail block onto the frame.

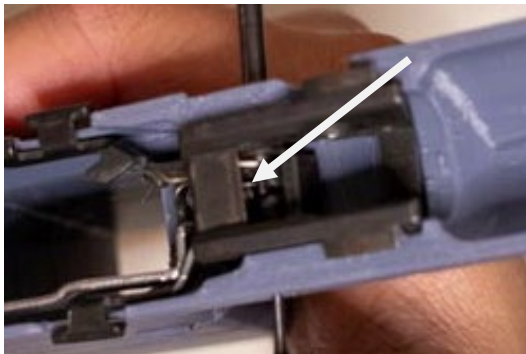
If you haven’t lost your takedown lever retention spring yet, place it against the cutout on the lefthand side of the front rail block as you insert it in.



It may require some gentle tapping to get it to seat completely into the frame.



Prepare the trigger pin. Start the pin from the lefthand side of the frame.



Use a punch to keep the trigger return spring taut forward to be captured by the trigger pin.

Tap the trigger pin into place.



Use a frame pin to secure the front rail block.



Finally, use a frame pin to secure the rear rail block.

ASSEMBLING THE SLIDE TO THE FRAME



Insert the takedown lever into the front of the frame.



Attach the slide to the frame.

With the slide cocked back, put the takedown lever into the locked position. (Horizontal.)



Insert the magazine and proceed to check function steps.

FUNCTION CHECK

Verify your firearm works by evaluating each of the following functions.

BE SURE YOUR GUN IS STILL UNLOADED.

Check that your chamber is empty, and that there are no rounds in the magazine.

- Testing the last-round hold-open
 - o Pull the slide back on an empty magazine.
 - o The slide should be held open.
- Charging the gun and testing the trigger
 - o Pull the trigger.
 - o The firing pin should fire.
- Testing the trigger reset
 - o With the trigger held back, pull the slide back. Gently release the trigger until you feel a tactile click (or an audible one).
 - o The trigger has reset.

When you have completed the function check, the assembly process is complete.

Be sure to remove your magazine and store your firearm in a secure and safe place.

SECTION V: TROUBLESHOOTING

You may encounter certain problems with your firearm either during usage or assembly.

- Pistol won't fire.
 - **Is the trigger and trigger bar "stuck"?** You might have to realign the trigger bar's "stem" to ensure it is going into the rear rail block, while still manipulating the sear.
 - **You might have an aftermarket or a modified trigger bar.** The "teardrop" might be damaged in a way where its curvature is pushed inward into the bar and won't activate the sear when the trigger is pulled all the way back. Use a punch and broader flathead screwdriver to lift it upwards slowly. A blowtorch or lighter may be needed to bend the droplet.
- Pistol won't reset.
 - **You might have an aftermarket or a modified trigger bar.** Much like how the "teardrop" manipulates the sear up or downwards, the "teardrop" is pushed aside to the right of the frame by the slide during a firing cycle. For the trigger to "reset", the teardrop needs to be at a certain height for its spring/dispensation to return under the sear to be applicable. In this case, you may want to use a punch and blowtorch/lighter to bend this tear drop down inwards from its broader base of the "droplet".
- Takedown lever keeps falling out when the gun is taken down.
 - **Did you lose your spring?** The front rail block has a spring wire (very thin and small) that falls out easily and gets lost just as easily too. It's not required for operation, but this pesky QoL quirk emerges if you don't have it.'
- Last round won't feed with a compact magazine and standard/extended slide.
 - Due to the differences in magazine spring pressure and slide velocity for the longer slides against a shorter magazine, the last round tends to not get presented to the slide in time to be stripped. There is no solution, unfortunately. Rack the slide then continue firing.