Cutting Basics

Learn how to use your Silhouette Cameo® and Silhouette Portrait®
# Introduction

Now that you’ve got your Silhouette machine, it’s time to start learning the basics.

You’re probably feeling a little overwhelmed and wondering, “Where do I even start?!” Don’t worry. That’s why we created this handy-dandy guide for you. It’s got step-by-step instructions and pictures for each process to help you get the foundational knowledge you need to start becoming a Silhouette pro. Grab your Silhouette and supplies and jump in! You’re going to love it!

The first thing you need to learn how to do is prepare your machine; this includes adjusting your blade, adjusting the rollers (for the Cameo only), and loading your cutting mat. Then you’ll be ready to make your first cut. Once you have that foundation in place, you can add on to your knowledge by learning how to cut different materials and use different features, thereby unlocking all the potential of your Silhouette machine. There are so many possibilities! We can’t wait for you to discover them all.

Are you ready? Let’s get started!

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Adjusting the Blade

If you’re not using the AutoBlade (currently available on the Cameo 4, Cameo 3, and Portrait 2 models), then you need to know how to adjust your cutting blade manually. If the depth is too shallow, your material won’t be cut, and if your depth is too deep, you risk damaging your material and damaging your cutting mat. Once you know the recommended blade depth for the material you are cutting, adjusting your blade is pretty straightforward.

1. **Cameo 2 and Portrait**
   - Remove the blade from the tool holder by twisting the knob counterclockwise and pulling out the blade.

2. The blade needs to be manually adjusted to the number indicated in the Send panel prior to cutting. Different materials will require different blade settings.
3. To adjust the blade setting, place the blade into the adjustment socket so the arrow on the socket lines up with the red line on the blade. A ratchet cap, which is included with each blade can be used also.

4. Turn the blade to the desired number.

5. Reinsert the blade into the tool holder.

6. Turn the knob clockwise so the blade locks into place.
Cameo 4, Cameo 3, and Portrait 2

1. To remove the blade, pull gently on the tip of the tool holder. A small piece will extend, allowing you to pull your blade from the tool holder.

2. If you are using a ratchet blade, please see Steps 2, 3, and 4 in the previous section. Once your blade is adjusted, place it in the desired tool holder.

3. Gently push the extended piece back. Make sure it clicks into place.

The AutoBlade can only be used with the Cameo 4, Cameo 3, and Portrait 2. The AutoBlade will automatically adjust according to your cut settings. In the Cameo 3 the AutoBlade must be put in the left-hand tool holder. Other blades can be used with your Cameo in either tool holder.
Adjusting the Rollers

The rollers are an important part of the cutting machine because they help to grip the cutting mat and the material. Only the rollers on the Cameo machines are adjustable, and you can adjust the rollers to accommodate a few different sizes depending on the material or cutting mat size you are using: A4 (8 inches), letter (8.5 inches), 12 inches, and 13 inches.

1. Locate the release lever on the right side and turn it clockwise. When the lever is pointing up, the roller is locked in place. When the lever is pointing toward you, the roller bar is raised and the rollers are ready to be adjusted.

2. Grab the roller in one hand and hold the roller bar in the other. Twist the sliding roller so the pinchers are NOT in the notches.
3. Slide the roller to the desired media size and twist again to lock the pinches into place. There are four grooves your roller can sit in: A4, letter, 12 inches, and 13 inches.

4. Once you have your roller adjusted, twist the release lever to the upright position to lock it in place.

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**Cameo 3**

1. Locate the release lever on the right side and turn it clockwise. When the lever is pointing up, the roller is locked in place. When the lever is pointing toward you, the roller bar is raised and the rollers are ready to be adjusted.

2. Grasp the roller body and roller head and twist into the unlocked position.

3. Slide the roller to the desired position and twist to lock in place. Once you have your roller adjusted, return the release lever to the upright position to lock it in place.

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**Note:** Only the Cameo has adjustable rollers.
Loading Your Mat

The most common way you’ll be cutting materials is with a cutting mat, so it’s vital that you learn how to load it into your machine. While the Cameo and Portrait machines are slightly different, the loading concepts between the two machines are the same.

1. Silhouette cutting mats are available in several sizes. Be sure that you select the mat you are using from the Page panel before beginning your project. We are using a Cameo 12 in. x 12 in. mat and letter-sized paper.

2. Cutting mats are printed with a 1-inch grid pattern to help you position and align your material. Place your material on your mat to correspond with the display in Silhouette Studio® before cutting.
3. When loading a cutting mat into your Silhouette, align the mat with the white rollers. Make sure the arrow on the top of the mat is pointing into the machine.

4. Use the blue line on the left-hand side of your machine as a guide to align your mat. Select “Load Cut Mat” from the display. Your machine will roll your mat into the cutting area. You are ready to cut.

To extend the life of your mat, always replace the cutting mat liner when not in use.
Making a cut is the rudimentary function of your Silhouette machine. After creating your design in Silhouette Studio®, the next thing you need to do is prepare the design to be sent to cut. Once you’ve selected your material and how you’d like your design to be cut, Silhouette Studio® will tell your Silhouette machine all the adjustments it needs (minus the blade depth if you are NOT using an AutoBlade) to make to complete the cut job.

1. In Silhouette Studio®, click on the Send tab in the upper right-hand corner. The Send window will open.

2. The first step is to select your material. Select the media type you are using from the drop-down list.
3. Pick which tool you are using, what lines to cut, and whether you want to cut by Fill Color, Line Color, or Layer (Designer Edition only).

4. Check that your blade is set to the recommended setting and loaded.

5. Load your material with a cutting mat. Click the Learn icon at the bottom of the Send panel to check you have everything ready to send. When the settings are the way you want, click “Send.”

6. Your Silhouette will begin the cut job.

Once the Silhouette is done cutting, press the “Unload” button. Carefully peel away your cutout design. Peel the leftover paper/media off the cutting mat. Use a Silhouette scraper tool to scrape excess paper pieces from the mat. Replace the mat cover to keep it sticky.
Matless Cutting

If you are cutting material that has its own backing (such as vinyl or heat transfer), you do not need to use a cutting mat to cut it. Not only does this shorten the cutting process, but it also helps you extend the life of your cutting mat. You can use a cutting mat if desired, but it’s not necessary.

You’ll want to make sure that the width of material you are cutting extends to where your rollers are set. If your material isn’t wide enough, you’ll need to place it on a cutting mat first before it can be cut.

1. Load your media into your machine. Make sure you select “Load Media” and not “Load Cut Mat.” Open design in Silhouette Studio®. In the Page panel select “None” under the Cutting Mat section. You will see the cutting mat disappear from your design window.

2. Load your media into your machine. Make sure you select “Load Media” and not “Load Cut Mat.”
3. Choose your appropriate cut settings for your material.

   Send your design to your Silhouette. Unload your media.

   **Note:** If you’re cutting a design directly from a roll of vinyl or heat transfer, a tool you may want to consider using is the roll feeder. It allows the material to be continuously fed to the Silhouette machine, so it’s perfect for cutting jobs that are longer.
Using a Crosscutter

If you’re using the matless cutting feature on the Cameo 2 or 3 and cutting from a roll of vinyl or heat transfer, you have the option to use a crosscutter to cleanly cut the design piece away from the unused material roll. The crosscutter can be used either at the back of the machine or on the Rollfeeder, which you can purchase separately.

1. In Silhouette Studio®, open your design. Select “None” as the cutting mat in the Page Setup panel.

2. In the Send panel, go to the Advanced Settings. Select “Feed” from your feed options. Adjust the ending distance so that the material will feed through the back of the machine.
If you’re using a Cameo 2 or 3, you have the ability to use the crosscutter, which comes in handy when you are cutting vinyl or heat transfer without a cutting mat.

3. After your design has been cut from your material, select “Advance to crosscutter” from the LCD screen on your machine.

4. Line up the crosscutter on the track at the back of the machine. Make one quick pass for a straight, clean cut.
Dual Carriage

If you’re using the Cameo 3, you can use the dual carriage. This is an awesome feature because it allows you to perform two different tasks at once. You can do things like sketching and cutting at the same time, thereby saving you the time it takes to unload and load a different tool.

1. Open your design in Silhouette Studio®. Make sure your design is ungrouped so certain lines may be assigned to certain tools.

2. Load your first tool into Tool 1 of the carriage holder (the holder farthest to the left).
3. Repeat for your second tool into Tool 2 on the right.

4. Place your material on your mat and load it.

5. Go to the Send panel. Choose your material. Assign which lines you want to cut with which tools. To do this, select the lines on your design page and then click either Tool 1 or Tool 2. Adjust your action to match the tool you loaded into your tool holder.

6. Send your design to your Silhouette. Unload your project when it has finished with both actions.

Dual carriage applies to the Cameo 4 and Cameo 3
Sketch Pens/Pen Holder

Your Silhouette doesn’t just cut; it can sketch and draw too! Swap out the Silhouette cutting blade for a sketch pen or the pen holder tool, and instead of cutting the lines of a design, your Silhouette will draw them! The Silhouette sketch pens will fit in the tool holder perfectly. For other pens or drawing tools that may be a bit smaller, you can use any of the pen holder attachments.

If you are using more than one color for your project and you don’t have a dual carriage, you can add pauses in the Action panel. When your cut job pauses, change out your sketch pen for the next color and resume.

1. Open your design in Silhouette Studio®. If you are using Basic Edition, simply design your project with regular cut lines showing. If you are using Designer Edition or higher, you can use the Sketch Pen panel to customize your design.

2. Place your sketch pen in your tool holder on your machine. If you are using a machine with a dual carriage, you can use more than one sketch pen at a time. If so, assign the correct lines to the correct color.
3. In Silhouette Studio®, go to the Send panel and select “Cardstock” for your material type. Since you are sketching and not cutting the material, it doesn't really matter which material you choose.

4. Choose “Sketch” for your action and “Sketch Pen” for your tool.

5. Send your design. Remember, each line your sketch pen makes is a “cut,” so the sketching process may be a bit lengthy.

6. Remove your finished project. You are an artist without even trying!
Adhesive Materials

The Silhouette machines can cut materials with an adhesive backing. This makes creating your paper-related projects super easy because you can cut what you want, and then it’s ready to go—no need to worry about extra glue.

1. Open design in Silhouette Studio®.

2. Place the adhesive-backed material (in this case, chalkboard cardstock) on your cutting mat.
3. Load the cutting mat with the material into your Silhouette.

4. Select your media in the Material menu in the Send panel, manually adjust your blade accordingly, and proceed to cut out your design.

5. After your design is cut, remove the project from your Silhouette and carefully pick up the pieces of your design.

6. Apply the design to your project.
Cutting Basics

Cutting Fabric

Did you know that you can make the perfect fabric cutouts with your Silhouette? It’s pretty amazing, and it will revolutionize your fabric projects. Get a precision cut every time. You’ll never want to go back to using scissors again!

To cut fabric, you will need to apply some type of fabric stabilizer. Fabric is not rigid enough on its own to cut, even with a cutting mat. We offer three types of fabric stabilizers — clean cut, cut and sew, and wash away.

1. Open design in Silhouette Studio®.

2. Cut a piece of fabric that is larger than your design. Cut a piece of fabric stabilizer that is the same size as your material.
3. Iron together the back side of the fabric with the rough side of the fabric stabilizer.


5. Put your fabric on your cutting mat with the right side of the fabric facing up.

6. In the Send panel, choose “Fabric” as your material type. Send your design to your Silhouette. Use a fabric blade to get the cleanest cut.

7. Unload your design and remove it from the mat.

8. If you used Fusible Fabric Stabilizer, you can now iron your cut fabric onto whatever surface you are working with. If you used Cut and Sew fabric stabilizer, your fabric is ready to sew. If you used Wash Away, wash your fabric with soap and water and then let it dry.
Heat Transfer

With heat transfer, you can customize any fabric surface you want! It’s great for t-shirts, bags, pillowcases, and even tea towels. Silhouette has lots of different types of heat transfer for any projects you’d like to do, and the great thing is all of them have the same basic cutting and application processes.

1. Open design in Silhouette Studio®.

2. Load your heat transfer into your Silhouette. Heat transfer is lined, so if your piece is large enough, there is no need to use your mat. But, if you have a smaller piece, place it on your cutting mat and load.
3. Before you send your design to your Silhouette, make sure to MIRROR IT. Don’t forget or all of your text will be backwards. The easiest way to do this is right-click your design and select “Flip Horizontally.”

4. Choose “Heat Transfer” in the material drop-down menu located in the Send panel and manually adjust your blade, if necessary, to the recommended settings shown. Send your design to your Silhouette.

5. Once your design is cut, unload it. Weed your design. That is, peel off the extra vinyl and leave your mirrored design on the clear backing.

6. After the design is weeded, place it on your desired surface. Use an iron (or a heat press) to adhere the vinyl. We recommend using a piece of light-weight fabric between the iron and the vinyl.

7. Peel off the transfer sheet.

8. That’s it! If you placed it on something you are going to wear, make sure to turn the garment inside out when you machine wash it.
Shrink Plastic Sheets

Using shrink plastic sheets is an easy way to create custom jewelry, key chains, cupcake toppers, and more! Create and cut your design using the Print & Cut feature and then bake the plastic so that it shrinks and becomes thicker.

1. Open or create your designs in Silhouette Studio®. Resize them. Keep in mind that a baked piece will be approximately three times smaller than a printed one, as shown above.

2. Add a circle to each design for the jump rings to go through. If you are using shrink plastic for the first time, add a couple of extra designs that you can use as test items. Also, make sure to turn on the registration marks (found in the Page Setup panel).
3. Feed the shrink plastic sheet into your home printer. (Tip: For the best results, print your design using the low-quality printing settings to lighten the designs and prevent them from becoming too dark after they are baked.)

4. Place the printed sheet on your mat and feed it into your Silhouette machine.

5. In the Send panel, choose “Shrink Plastic” as your material type. After cutting the designs, remove the designs from the cutting mat.

6. Preheat the oven to 290–325°F (140–160°C). The baking process takes about 2 minutes. When you see that the plastic is small and flat, quickly remove the baking sheet from the oven, and immediately press the plastic down with a flat tool.

7. Remove the piece from the cookie sheet and repeat each process with each piece you have.
Stamp Material

You can use Silhouette special stamp material and cutting mat to create custom stamps you can use for your paper crafting. Once you cut out the stamp, you can apply the stamp material on an acrylic block and use it as many times as you want!

1. Open design in Silhouette Studio®. Choose your page size and cutting mat to the Stamp defaults.

2. Remove the liner from the perforated cutting mat.
3. Remove the liner from the stamp material. Place the stamp material onto the mat and gently pat it into place until all air bubbles are pressed out. Do not stretch or spread the stamp material. Load the mat into your Silhouette.

4. Select “Stamp Material” from the Material drop-down menu in the Send panel. Adjust the blade to the recommended settings. Click “Send.”

5. After the Silhouette is done cutting, unload the mat.

   Gently peel out the stamp. Don't worry if the blade did not cut all the way through. The material will break away cleanly.

6. Arrange the stamp onto the Silhouette acrylic block that fits it most closely. Use the block's grid for spacing and alignment.

7. Your stamp is ready to use. Press the stamp into the ink pad. (It’s normal to get ink on your acrylic block.)

8. When stamping, be sure to press straight down on a flat surface. When you’re done, wipe away excess ink with a tissue or paper towel. Rinse and dry stamps and blocks before storage.
Sticker Paper

Stickers make the crafting world go round because they can be used for so many things: labels, planning, rewards, decorations, envelope seals, and lots of other things! You can easily make your own custom stickers using Silhouette’s Print & Cut feature.

1. Open the Page Setup panel, change your page size to Letter and add the type of registration marks to the page.

2. Make sure any designs you have don’t overlap with any of the registration marks; otherwise, the designs may not be cut correctly.
3. Feed the sticker paper into your printer. Make sure that your designs will print on the sticker paper side and not the backing. Click Print.

4. Place the printed sheet on your cutting mat and feed the cutting mat into your machine.

5. Click the Send tab and choose the type of sticker paper you are using as your material. Then make sure you’ve clicked the Cut Edge option to cut around, not through, the design.

   Click Send. Your Silhouette will read the registration marks and proceed to cut out your stickers.

6. Remove the sticker sheet from the cutting mat and peel away your stickers from the sticker backing when you’re ready to use them.
Vinyl

If you’ve been looking for the be-all and end-all material when it comes to cutting machines, it’s vinyl. You can use vinyl on home decor signs; as vinyl decals to put on cars, jars, mugs, or phone cases; or as stencil material for painting or glass etching. Silhouette has all types of vinyl for you to try out, so you’d better get started! Don’t forget to pick up some transfer tape to help you apply all that vinyl!

1. Open design in Silhouette Studio®. Select “Vinyl” in the Material tab in the Send panel.

2. Load the vinyl into your Silhouette. A cutting mat is not necessary. However, if your vinyl piece is smaller than what the rollers can adjust to you will need to use a cutting mat. Click “Start.”
3. After your image is cut, remove the vinyl from your Silhouette. Weed (peel away) the negative space, so all that remains on the vinyl backing is your design. Now to get it onto your project. See instructions below.

2. Cut a piece of transfer paper or tape big enough to cover your entire design.

3. Remove the backing from your transfer paper. Using a Silhouette scraper, apply the transfer paper to the vinyl. Press it down hard so it evenly adheres to the transfer paper.

4. Move your vinyl to your project and place it where you want. Place a piece of tape down the middle of your project. This will act as the “hinge.”

Applying vinyl with transfer paper and the hinge method

1. Start by cutting your design out of vinyl. Weed your design.
6. Use scissors to cut away the adhesive backing from that one side.

7. Press your vinyl onto the surface. Use a scraper to press out any bubbles.

8. Remove the tape from the middle.

9. Gently fold back the other side of your design.

10. Remove the adhesive backing from that side.

11. Press that side down onto your surface. Use a scraper to adhere it and press out bubbles.
12. Remove the transfer paper. Be careful to make sure all of the vinyl sticks to your surface.

13. You perfectly aligned your project.

Silhouette Pro Tip: If you have a small design, you don’t need to use the hinge method to apply your vinyl. Simply place your design on your project like a sticker and peel off the transfer paper.
Print & Cut

A Print & Cut image has two parts: a design you will print with your home printer and corresponding cut lines you will cut with your Silhouette. Though the cut lines will show in Silhouette Studio®, they will not be printed.

In addition to regular printer paper and cardstock, there is a large selection of Silhouette materials that can be used with the Print & Cut feature, including printable heat transfer material, printable foil, printable sticker paper, printable magnet paper, printable tattoo paper, printable cotton canvas, and printable adhesive kraft paper.

1. Open your Print & Cut design in Silhouette Studio®. Make sure your workspace matches the size of paper you will be printing on.

2. Click on the Registration Mark icon located along the upper right-hand toolbar and select the style of registration marks. Type 1 is standard (which is what you will most likely use), and Type 2 is for older machine models.
3. You will note that there are now crosshatched areas on three corners of your workspace. Make sure that your design does not overlap into the crosshatched area, or your Silhouette will have trouble reading your registration marks.

4. Once your design is ready to go, print your job to your regular printer by clicking on the Print icon in Silhouette Studio®. Make sure you have loaded your material into your home printer correctly, whether it is cardstock or a specialty material. Here we are using printable foil.

5. Load your printed material into your Silhouette using a cutting mat. Select the appropriate material from media list of the Cut Settings panel and adjust your blade accordingly.

Silhouette Pro Tip: Are you using metallic materials for a Print & Cut? We suggest leaving the registration marks at the default settings and increasing the force to the max.

Silhouette Pro Tip: If your machine fails to read your registration marks, you can choose to “retry manually” in the Send panel. Use the arrows to position the carriage above the marks and select “Register.” After the machine registers the mark, it will cut like usual.

6. Click “Send” and your Silhouette will begin scanning the page for the printed registration marks. After the registration marks are found, the Silhouette will proceed to cut as usual.

7. Unload your material and complete your project.
Conclusion

We hope that these how-tos help make you more confident when it comes to discovering the potential of your Silhouette machine. Now that you’ve got the foundational skill in place, it’s time to expand your wings a little bit, start thinking outside the box, and make creative projects with your own style infused. The best way to learn is to do, so jump in and start mastering your Silhouette!

If you ever need some ideas, don’t forget to check out silhouette101.com or our Instagram and Facebook pages. We’re constantly adding new project ideas and showing you how artists and designers are using their Silhouette machines. It’s perfect if you’re looking to be inspired!

Don’t forget to check out The Silhouette Handbook and our other eBooks on silhouette101.com to learn more about the Silhouette machines and software and how you can keep building your skills to make you a Silhouette expert!