



# “How To Start An Embroidery Business”

## Applying High Quality Design Techniques

Hi there, I am **Joyce Jagger**, **THE Embroidery Coach**, and I want to welcome you to another lesson in “How to Start An Embroidery Business!”

During This class I am going to be focusing on How To Apply High Quality Design Techniques. If you want to have a successful embroidery business, one that is going to produce happy repeat customers, you must be able to produce high quality designs.

When your designs are higher quality you can charge more for them than the embroiderer that turns out mediocre products and that seems to be the norm with most embroiderers. Customers are getting smarter and more quality conscious in today’s world and if you want to have the type of embroidery business that is going to create a good living or lifestyle for you then your designs must stand above the crowd. This does not always mean you have to digitize the designs yourself, but you must be able to edit or tweak the designs to produce the best results on all of the different types of fabrics.

When you sew out a design you want it to look the same no matter what type of fabric you are sewing it on. If you do not know how to tweak the designs, they will not look the same. If you have a design that has been digitized for a woven fabric and you sew it out on the stretchy knit fabric, the columns will be thin and the fill areas of your design may look sparse or you may even be able to see the color of the fabric through the threads. In this class I am going to cover 2 of the most important aspects of creating high quality design techniques:

- Underlay Stitching and why is it important?
- Pull Compensation and how it affects the design?

I will also talk about how to determine the right adjustments for the different types of fabrics!

All three of these go hand in hand when it comes to making adjustments to your designs to make them work on the different types of fabrics. When you first create a design whether you are digitizing it or just setting up lettering in your software there are certain adjustments that must be made depending on the type of fabric you are going to be sewing out your design on.

If you are sewing on a knit fabric, your stitches need to be longer than if you are sewing on a woven fabric. When you sew out your design, regardless of what type of fabric you are using, you want your design to appear to be exactly the same. If you do not make adjustments to it, the columns of your lettering are going to appear thinner than they are on a woven fabric if you do not make the right adjustments to lengthen the stitches.

The first topic I am going to talk about is Underlay Stitching. You need to have an understanding of Push & Pull Compensation and Underlay Stitching before you can create high quality designs.

Many embroidery design programs have templates, or presets or styles that you select for the different types of fabrics and sometimes they work, but you need to be able to make adjustments to these templates, presets or styles in order for them to work with all types, weights, textures and thicknesses of your fabrics. Some machines even have automatic adjustments for the thread tensions and the thickness of fabrics but this is not the same thing. It is imperative that you learn how to make these adjustments.

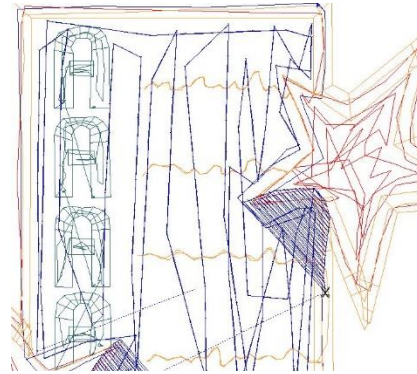
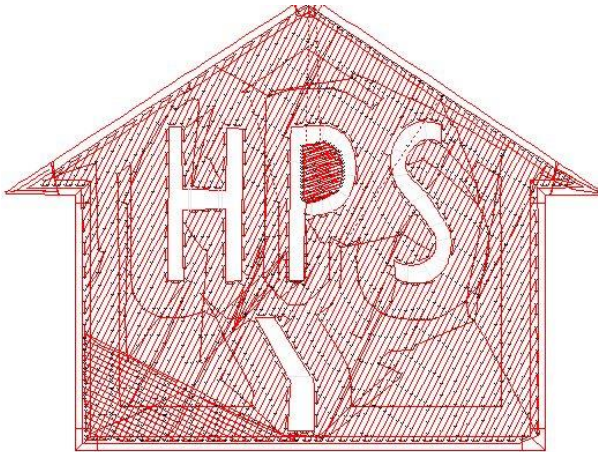
There is not a lot of time, if any, spent on these 2 topics when you are receiving your basic embroidery design training and without a good understanding of both it is very difficult to produce high quality designs.

## **Underlay Stitching**

Underlay stitching is the most important and most under rated element of creating your design. Like anything else that is built, you need a good foundation and Underlay is the foundation of your embroidery. Many embroiderers are very confused and want to know:

- How they can tell if they have any Underlay in their design?
- What does it look like?

Underlay stitches are the stitches that are sewn on your fabric first before the actual top stitching is sewn. Sometimes they will follow the same line as your embroidery and sometimes they will look very strange to you if you are new to



embroidery and are not familiar with Underlay. It depends on what type of Underlay you have chosen or how the digitizer has laid it out. Sometime they will do a run stitch in an unorganized way around a design to attach the fabric to the backing or stabilizer but it does not really give it much of a foundation as the example above on the right.

The best way is to use the functions of the software and add it to the design based on the type of stitches and fabric that you are going to be sewing on.

Many digitizers will increase the top stitching giving you a very heavy density rather than creating the proper underlay under your designs. Actually the more underlay you have the less top stitching you need. This gives you a really great foundation and you will have less pull up and puckers in your embroidery.

Your underlay stitching is the main foundation of your design and the type of fabric that you are going to be sewing on will determine what Push and Pull settings you will be applying to your embroidery design segments or letters, but we will talk about Push and Pull compensation a little later.

## Underlay Has 6 Basic Functions:

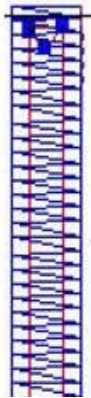
1. It attaches the garment to the backing creating a stable surface and smooth platform for the top stitching.
2. It helps to reduce the amount of give in the fabric.
3. It hides the color of the fabric that will be covered with stitching.

4. It helps to reduce the density of the top stitching.
5. It stops the fabric from puckering.
6. It keeps the stitches from sinking into the fabric.

### There Are 3 Different Stitches Used For Underlay Stitching?

1. Run stitches
2. Zig Zag stitches
3. Fill or Tatami Stitches

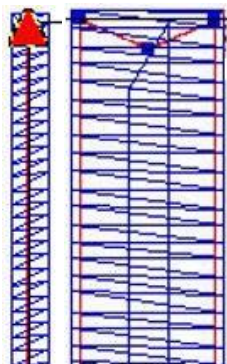
These 3 different stitch types make up the 5 basic types of underlay stitches.



**Contour or Edge walk** - This is a run stitch. It add a running stitch along the edge of the letter or the segment that you are creating. It is also known as an Edge walk or Edge run stitch. This type of underlay is used to create a roll over edge for your lettering or object. It is used with a Satin Path letter or Satin path column that is over 1.5 millimeters wide and in combination with Lattice under a Complex Fill stitch. It helps to give you a smooth edge on textured fabrics such as pique.

If it is too close to the edge the run stitches will pop out. You have seen this I am sure. When a design is finished you are left with some run stitches that are hanging out from the edge and you need to trim these off in order to save the design but it really never looks good.

The distance from the edge of your top stitching to the Contour underlay run stitch is your inset distance or margin. To move your run stitch closer to the center of the letter you would increase your number in the inset distance or margin box. From experience, I have found that .50 millimeters is a good

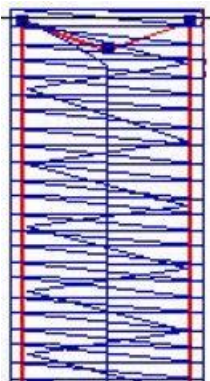


basic setting to start with. If you see some run stitching peeking out from under your top stitching you may want to increase this number. (Example: If it is set at .50 millimeters - change it to .60 millimeters. This will move it in.) Run another sample to check and see if this number is large enough.

**Perpendicular or Center Walk**- This underlay runs down thru the center of the column. It is also called **Center Run**

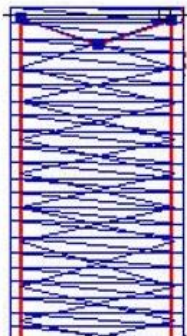
underlay. This underlay is used when you have a very narrow letter or column that is less than 1.5 mm wide. For that you will only use 1 line or pass of underlay down thru the center. In the Pulse software, the default is 2 lines or passes.

This underlay is good to use in combination with contour when you have a wider column and need a little extra for lift in the center of your column. In some programs you can add as many lines as you like depending on the size or width of the letter or object. I have personally used this combination on heavy rough textured types of fabrics such as Carhart jackets with excellent results.



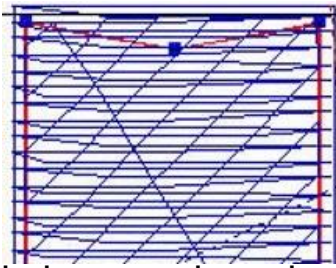
**Parallel or Zig Zag** -depending on your software. This underlay is created using Zig Zag stitches or run stitches with square ends. In the Pulse software it is called parallel and in some software programs it is called the Zig Zag underlay. This can be used on a lightweight terry cloth or fleece. You can increase or decrease the amount of density in your **Parallel** underlay. It is much better to increase the underlay stitch density rather than the top stitching stitch density. You will end up with a smoother look and better coverage.

You can also control the inset distance of the underlay in relation to the edge of the top stitching. The distance between the outside edge and the edge of the underlay is your inset distance or margin.



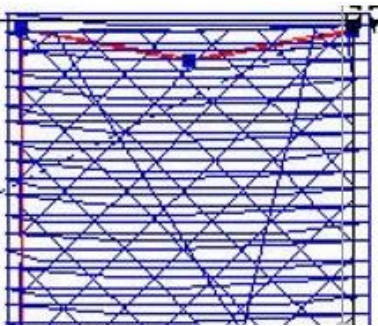
**Zig Zag** - This type of underlay is the same as the **Parallel** except it has twice the amount of stitches. It runs down the column and then up the column creating twice the amount of stitches as the **Parallel**. In some programs this is known as a **Double Zig Zag**. This is a better choice for heavy terry cloth and pique. You may even want to increase your top stitching density along with your underlay density if you are working with an extra heavy terry. This will lift the top stitching off of the fabric and help to keep it from sinking into the loops of terry cloth.

It also works to increase the density of your **Zig Zag** underlay to give your top stitching a puff or rounded appearance. You can also control the inset distance or margin of the underlay in relation to the edge of the top stitching.



**Lattice, Fill, or Tatami-** This underlay is a low density fill stitch used underneath Complex Fill stitches or Tatami stitches, depending on which program you are working in. Lattice is usually used in combination with the **Contour or Edge walk** underlay. It runs at a 45 or 90 degree angle to the top stitching in a lattice form. It

helps to reduce the pulling up of the fabric as it is stitching and to keep your stitches in good registration especially if you are going to add a border. It will help to keep the border in the proper place. It is best to lay down the Contour or Edgerun underlay first and then apply the Lattice underlay. This traps the Lattice underlay stitches and keeps them straying outside of the area.

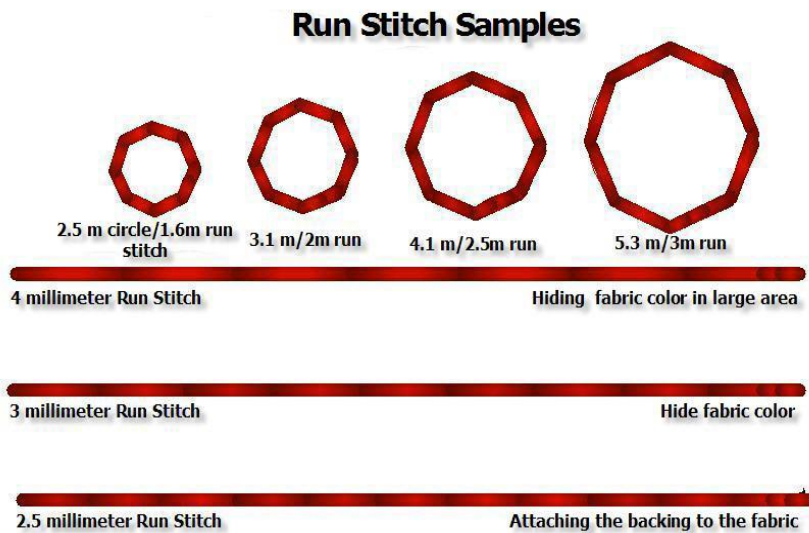


**Full Lattice or Double Tatami -** Stitches forming a full lattice effect going in both directions. This is a good choice if you are using a heavy contrast thread or fabric color such as a white thread on top of a black garment. This will hide the color of the fabric. This is also a better choice for heavy towels or any type of terry.

**There are some basic rules about Underlay that are very important for you to learn.**

- Underlay run stitch length can vary depending on the purpose of it or the size of your object or letter.
- Your underlay stitching will be more effective if it is consistent and not randomly laid down.
- Underlay density can be increased and decreased just the same as the top density.
- The underlay for each object or letter should be created at the same time that the object or letter is created.
- More than one type of Underlay can be used on the same object or letter.
- If you are sewing on a knit or stretchy fabric and using more than one type of underlay in an object or letter, such as a Zig Zag underlay and a edge run or contour, lay down the Zig Zag first and then the contour or edge run.

- Create and keep recipe file cards for the settings that you use for the different type fabrics so that you have this to refer to.



## Basic Functions of Underlay

- **Attaches the garment to the backing creating a stable surface and platform for the top stitching.** - The shorter the run stitch the tighter it will hold the fabric and backing together. Add Lock Knot or Tie End to beginning of segment
- **Underlay helps to reduce the amount of give in the fabric** - Will help to keep your design in good registration and decrease the Push and Pull factor created by the pulling of the thread. Acts as a barrier and keep each area of your design well defined.
- **Underlay hides the Color of the Fabric** - 3.5 or 4 millimeter stitch length for high contrast. **DO NOT** increase over 4 millimeters!
- **Helps to reduce the density of the top stitching.** - If you do not use underlay you have to increase your density and your embroidery becomes very stiff and hard
- **Stops fabric from puckering** - Heavy density and no underlay can cause your garment to pucker around the embroidery. Embroiderers complain that they cannot embroider on T-Shirts. Have not used the proper underlay and sometimes no underlay at all

