
The repeat and duplicate function is your perfect choice for not only multiple designs, but precise placement and creative overall embellishments. When using the repeat function, the colors of the design are automatically color sorted so the embroidery takes less time! This tutorial is for the Baby Lock Altair and similar machines.

Choose an Embroidery Design

Any design can be repeated with the repeat function. The design can be repeated in a single line or fill the hoop. Choose the design to be repeated and select it to place it on the Embroidery Edit screen. Consider the size of the final repeated design. Make any size adjustments that require re-calculation of stitches now before repeating the design. After the repeat function is used the design can be re-sized, but the stitches can't be re-calculated without returning the design to the original size and orientation. That means you would need to start any repeat function from the beginning after re-calculating stitches.



You can move the design within the workspace before repeating it, but it is not necessary. The repeated designs can be moved during the repeat process. The repeat function works with the lettering designs built into the machine as well as when the lettering is entered into the machine as individual embroidery characters. The repeat function works very, very well and is the recommended editing feature for the “decorative stitches” and buttonhole embroidery designs built in the machine. If the design has multiple colors, they are automatically sorted for ease in embroidery. The machine will stitch all the first color in all the designs without stopping and then move on to the second color. That’s a real time saver.

Multiple designs can be grouped and then repeated. Start to group multiple designs using the multiple selection key on the bottom of the workspace. (Red boxes in the image on the next page.) Touch the icon and then select the designs to be grouped. Touch okay. The repeat function key is grayed out until the group key is selected.



More than one design or grouped designs can be repeated during any embroidery session. After repeating any design, select add and then continue the process. To space a set of designs within another set, use the spacing and move keys to place the designs apart and into position.

How Many Do You Want?

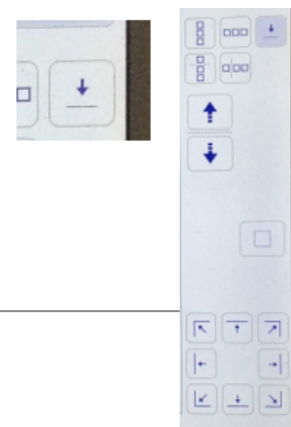
With the design on the workspace, touch the repeat key. The right panel changes to the repeat screen. The first icon will be automatically selected for repeating the design vertically. To repeat vertically, touch the icon for adding a design above, adding a design below, removing a design above or removing a design below. There are also icons for spreading the designs apart or closer together. The icon that looks like a single square returns the design to a single unit. The move keys reposition the design while using the repeat icons. You may need to center or move the designs to add additional units.

To repeat the designs horizontally, select the horizontal icon. The same choices are available, except now they multiply the units horizontally. All the designs will be duplicated, so to fill the embroidery field repeat a design in one direction and then in another. If the design will be joining itself to create a larger design by re-hooping, don't completely fill the embroidery field. If the design is maxed out within the hoop it can not be moved to position it precisely. The fabric would need to be perfectly hooped to join the designs. It's possible, but not easily done.

Now Let's Repeat Stitch the Repeats

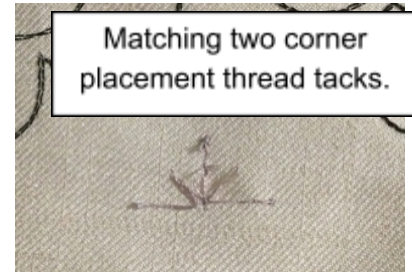
Before stitching any design that will be repeated, put the design into memory so it can be retrieved later.

To re-hoop and stitch additional perfectly placed embroidery, we need to add side and corner marks for alignment. After editing the design add any marks needed to join the designs by selecting the add mark icon. A new screen appears and one of



the designs is selected. Eight different thread mark options can be chosen for each unit in the repeated design. Select a mark by touching it and it will add that thread mark to the design. Use the arrow keys to select the next unit to be marked. If you change your mind about a thread mark, just go back to that unit and touch the mark to remove it. The thread marks will stitch at the very end of the embroidery in the last color. Thread placement marks can be added to a single design without using any other repeat function. The thread marks stitch very loosely and are easily removed.

When stitching a repeating design, start out straight. Make a center line on your fabric with a pressed crease or removable mark. Stabilize the embroidery design appropriate to the density and type of design. Consider a continuous piece of stabilizer for the length of the desired project if at all possible. Hoop the first design aligning the center mark on the fabric with the center marks on the hoop. Be extra careful that the design is as well centered as possible because any slight rotation error will be more and more exaggerated as the design gets longer. Consider stitching the design on a larger piece of fabric and then cutting the finished embroidery to the appropriate size for the project. The designs can begin in the middle of the project or start at one side and continue across.

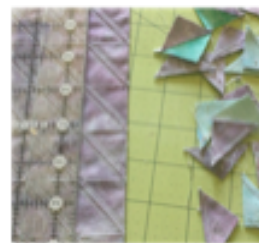


After stitching the first design, remove the fabric from the hoop. Re-hoop the fabric in the next location keeping the following in mind:

- Re-hoop as straight as possible using the line or crease on the fabric and the marks on the hoop. Rotation is not possible with a repeated design without removing the connection of the designs. The machine will revert the repeat to individual designs.
- The marks made in the previous embroidery must be within the embroidery field. The embroidery field does not extend to the edge of the hoop.
- To place the next design in connection, first use the embroidery positioning app to bring the image of the re-hooped fabric on screen. If the embroidery marks are difficult to see, use a piece of removable tape or paper to highlight the mark before capturing the image.
- Move the design to match as closely as possible using the positioning app image. Use the magnification feature to really zoom in. The thread marks should match at the corners.
- To check the position, use the trial key at the bottom of the Embroidery screen to move the needle to any of the eight locations around the design. Touch the W+ key on the upper left of the screen to activate the LED pinpoint placement light. Use the move keys to perfectly place the light over the corner of the thread mark. Move to all the appropriate placement marks to check the design.

Something a Little Different..... really , very small quarter square triangles

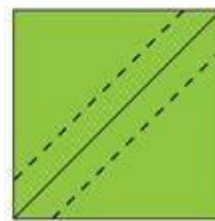
Interested in a little challenge? Really, really, really small quarter square triangles in quantity are possible by creating a double diagonally stitched square and adding cut location tacks in IQ Designer.



Make just one unit using a square shape and adding two forty five degree stitching lines. Create multiple units using the repeat function in the edit screen. By turning off the jump and end color trim features, the design will stitch faster and give additional guidance to trim the mini squares apart.

Open IQ Designer and touch the shapes key. Select the square shape and then OK. Don't touch the workspace as that will de-select the square. Touch the Size Key and reduce the square to the size that you want. This square should be about 1" larger than the finished size of the squares you want to make. Watch the size of the shape on the screen or select a gridded background for your workspace in Settings. (You may need to make a test square to get the perfect size.)

Create the double stitching lines by opening the Line Properties screen and selecting Straight Line from the drawing options and the single stitch option. Touch OK. On the workspace, use your finger or a stylus to draw as straight a horizontal line as you can on anyplace other than the square. The line should be longer than the diagonal of the square. It's okay to just approximate the length. Use the Undo key and re-draw until you get a line that looks good. Don't touch the workspace after you make a good line or you will de-select it. Touch the Rotate key and then the centering button to put the line in the center of the workspace. Touch the 10 degree key four times and the 1 degree key five times to change the line to a forty five degree angle. Use the move keys to position the line above and to the right of the diagonal. Leave the Rotate Screen by touching OK. Touch the Duplicate Key to create a second line and then touch the Move key to move it into position below and to the right of the diagonal. See the dotted lines in the image right for suggested placement. The solid line in the image will be our cutting line after embroidery.



Erase the parts of the square we don't need by selecting the Eraser key and choosing the size of square eraser that best suits the size of the square. Zoom in on the Square if necessary and erase most of the square except a small portion of the four corners. Use the undo key if you get a little aggressive with the removal of the lines. When you are happy with the image, put the line drawing into memory of the machine or onto a memory stick. This is very important as you may want to change the size after stitching a test square.



Touch the action icon "Next" in the lower right corner of the screen to check the line properties of your drawing. Check that all the lines are a single stitch and not a zig zag or triple stitch. I found that the default stitch length worked fine, but you could change this setting later after sewing a test square. Keep touching the icon in the lower right to send the embroidery to the machine. I usually put the embroidery design into the memory of the machine just to be safe.

These squares are embroidered onto two fabrics placed right sides together in the hoop. Make sure the fabric is well pressed and I stabilized both pieces of my fabric with Best Press 2. This product gives the fabric body and I was able to finger press the seam allowance to one side

after the squares were cut apart. Make sure the hoop is tightened before placing it on the machine. You will want to stitch a test square in a smaller hoop to check the finished size. If you are pleased with the size, continue on to stitching multiples. If you are not, return to IQ Designer, recall the square and change the size. This design performs best when created in the desired size in the artwork and not adjusted as an embroidery design.

To make the embroidery stitch out faster and leave loose threads between the stitches to act as a cutting guide, turn off all the thread trims. (Don't forget to turn them back on for your next project when you are finished with the design!) Create enough multiples for your project by touching the Repeat key and creating a row of squares and additional rows with the plus keys in the horizontal and vertical selections. Cut apart your mini squares. Use the thread tacks and the loose threads as your guide. I found it easiest to trim the outside edges and rows with the rotary cutter and then using a sharp pair of scissors to cut the squares and then the diagonals. The thread tacks can easily be trimmed and the squares pressed open.