**Camp Lebanon**

**General Quilting Instructions**

The purpose of these instructions is to assist Quilters, especially beginners, with basic quilting information. Hopefully, this will take away some of the mystery of quilting and be a reference for the next projects made at home.

We encourage you to visit your local quilt shops and online tutorials for additional information as you pursue your quilting journey. You will readily find there are many different options within the quilting processes. What is most comfortable for you personally will be your best. You may discover and create yet another new technique, method, or approach.

***Happy Quilting!***

**FABRIC PREPARATION**

**Ahead of Time**

Make sure all the fabrics are colorfast. You can evaluate for colorfastness by putting a small swatch of the fabric in a clear glass container with 1 cup of water and microwaving it for 1.5 minutes. If the water turns color, the fabric is not colorfast. You can wash them ahead of time with a “Color Catcher” found in the detergent section of the store.

**Thread**

It is best to use a fine quality sewing thread in making a quilt. Aurifil is one of our preferred choices. Do NOT use quilting thread as this is for hand quilting only.

**Pressing of Fabric**

* There is a difference between ironing and pressing your fabric. Ironing is moving the iron back and forth across the fabric. Pressing is lifting the iron **UP** and **DOWN** on the fabric which will prevent stretching.
* You may wish to press your fabric before cutting using a light spray starch or a fabric spray such as Best Press. Fragrance free is preferred when at Camp.

**Pressing Seams**

Two Step Process:

1. First “set” the seam by pressing the seam as sewn.
2. Second, open the fabric (right side facing up) and press the seam, both layers to the same side.
3. Generally, seams are pressed toward the darker block to prevent the seams from showing through your lighter blocks. *However*, based on the quilting pattern, there are exceptions to this guideline to avoid a bulky seam.

**Labeling of Fabric**

It is helpful to identify your fabrics as specified by the pattern in a manner comfortable to you.

For example: A=dark, B=light, OR “background,” “block”, etc. We suggest you cut a small swatch of each fabric, make a fabric “key”, and tape it to your pattern to remember which fabric you intended to use where.

**ROTARY CUTTING**

**The Rotary Cutter**

1. We recommend large or extra-large rotary cutters for quilting projects.
2. Be careful - it is **RAZOR** sharp! **ALWAYS** close the blade when done cutting each strip. It is too easy to accidentally brush against it when moving the fabric and it can result in a deep cut or ruined fabric.
3. Use firm but not hard pressure.
4. Change the blade if it begins to skip when cutting the fabric.

**The Mat (For your home use)**

1. Larger mats have greater flexibility for different projects.
2. Smaller mats are easier for class/travel.

IMPORTANT: DO NOT use the lines on your mat for accurate measurements. As unbelievable as it seems, the mats are not accurately marked. Instead, use your quilt rulers to measure for accuracy.

1. The cutting technique recommended is to use the horizontal lines on the mat as a **guide** and use your quilt ruler for measuring.

**The Ruler**

1. More accurate than the lines on a mat.
2. Thick lines on rulers CAN impact measurements; so be consistent which edge of the thick line you use when measuring. (Up to the line, under the line, etc.)
3. A 5-6.5” wide x 24” long ruler is best for greater flexibility.
4. It is also nice to have smaller rulers for shorter cuts. When purchasing multiple rulers, stay within the same brand to ensure measuring consistency.
5. Since rulers will vary in the accuracy of their measurements, once you start a project use the same ruler for the entire project.
6. At Camp, rulers are provided for your use. If your pattern calls for a specific ruler, please bring it.

**Cutting Basics**

1. ALWAYS roll the cutter AWAY from you.
2. Always cut in the same direction on the mat - away from you.
3. Hold the cutter at a 90-degree angle to the ruler to ensure crisp, straight cuts.
4. Apply pressure as you roll the cutter along the edge of the ruler.
5. Carefully “walk” your hand up the ruler.
6. Cut until the rotary cutter is opposite your fingertips holding down the ruler.
7. DON’T lift the cutter.
8. Carefully reposition your ruler hand by “walking” up the ruler and then roll the cutter away from you.
9. This will avoid the ruler slipping sideways on long cuts, which affects your measurements and quilt.

**Cutting Technique**

Easier sewing is achieved when all the fabric is cut on the cross grain. Here’s how to cut your strips on the cross grain:

* Freshly press the fabric to eliminate the wrinkles. (Optional: Use very light starch. This is especially helpful when working with bias piecing.)
1. Line up the selvages of fabric.
2. With the fold toward you, position it on a horizontal line of the cutting mat (one of the closet ones to you).

The side edge of the fabric needs to be “squared” before any strips are cut. For this first “square up” cut, if you are right-handed, the fabric will be to your left (to your right if you are left-handed). Using your quilter’s ruler, place it so that a horizontal line of the ruler is on the fold of the fabric. A vertical line of the ruler should then be parallel with (or on top of) one of the mat’s vertical lines. Cut off the raw edges.

For cutting strips, reposition your fabric (or yourself) so that the fabric is to your right if you are right-handed and to your left if you are left-handed. To cut strips, place the line of your ruler that corresponds to the strip width on the “squared up” edge of the fabric. Cut with these things in mind:

1. In cutting, the ruler measurement is your guide for the strips.
2. Be consistent in lining up the ruler for each strip to enhance your accuracy.
3. If you are making a large quilt you may want to square up your fabric edge from time to time during the cutting process.
4. Cut ONLY where your hand is HOLDING the ruler. “Walk” up the ruler to reposition your hand.

**SEWING PREPARATION**

**Preparing Your Machine**

Ahead of time, be sure it is cleaned, oiled and ready with a new needle.

Also identify your stitch length. The recommended stitch length for construction of the quilt top is **12** stitches per inch. Experiment with your machine and fabric to determine the appropriate setting. (Machine quilting the completed quilt will use a stitch length closer to 10 stitches per inch.)

**Preparing Your Quarter Inch Seam Allowance**

In piecing, we use a “scant” 1/4” seam allowance. A “scant” 1/4” is 1-2 threads short of a 1/4”. This is used to compensate for the pressing of the seam open. Determine your scant 1/4” mark using a ruler and test on scrap fabric pieces. Even if your machine has a ¼” foot you should confirm it is accurate.

Put the ruler under your presser foot and GENTLY move the needle down until it JUST touches the 1/4” marking on the ruler. This will show you where your 1/4” seam allowance is. Put a piece of masking tape along the edge of your ruler on to your sewing machine bed.

Test the accuracy of this mark by:

* Cutting 1 – 2.5” strip of scrap material. Cut this into 3 pieces at least 3-5 inches long.
* Sew 2 of these strips together along the long edge using your ¼” guide. Press.
* Sew the 3rd strip. Press
* Measure. The resulting width should be 6.5”. If not, adjust your mark accordingly and continue until you have an accurate 6.5” width.

As you sew, use the tape as your 1/4” guide. (Hints: It is helpful to place many layers of masking tape on top of each other and then cut a straight line using this edge for your fabric to bump up against. Also, package of post it notes or Dr. Scholl’s moleskin can also be used.

**Sewing Tips**

Unless otherwise noted, sew with:

1. Right sides together
2. A scant 1/4” seam - check frequently as you sew to ensure ongoing accuracy.
3. A stitch length of 12-13 stitches per inch

**Chain Piecing**

A time saving measure for assembling quilt block components is to do the same step for each block or “*chain piecing*”. After each step, clip the blocks apart, press and begin chain piecing the next strip onto the block.

**Using a Leader/Ender (also called a “thread bunny”)**

Take a scrap of fabric folded over and use it to sew off onto when you come to the end of your seam. Cut your work off the back side where you sewed onto the scrap. Leave the scrap under your presser foot and then when you start the next seam simply sew off the scrap and onto your seam. Cut the scrap off and use again. This trick is especially effective when you are trying to start sewing at a point.

**QUILT ASSEMBLY AND LAYOUT**

When all the quilt blocks are completed, lay them out following your pattern. Once this is determined, it is time to sew the blocks together. One quick and easy method is to lay out your blocks on the floor or table as determined by your design. Then number the top of each vertical column with a piece of masking tape or paper. (HINT: Mark the pieces near the top, so you always know which is the top of the block.)

 Col Col Col Col

 1 2 3 4

 

**Vertical Assembly**

1. Flip each of the column 2 blocks on top of the column 1 blocks immediately to its left (right sides together and ensuring that edges stay together).
2. Beginning at the top of this “combined” column, stack the blocks together with the top staying on top and DO NOT TURN THE BLOCKS! Label your blocks so you remember their position. (For example, label the upper right hand corner consistently with the column number.)
3. Now, stack each remaining column, from top to bottom. Again, DO NOT TURN THE BLOCKS! Place each column in order on your work surface.
4. To sew, begin with the combined column 1 and 2 stack. Chain piece to end of this stack. DO NOT CLIP THREADS BETWEEN BLOCKS.
5. When all blocks from columns 1 and 2 are pieced, remove from machine. Now, chain piece column 3 to column 2 blocks - beginning at the top of the quilt. DO NOT CLIP THREADS!
6. Continue by adding column 4 to column 3, etc. until all vertical columns have been joined.

Remember, for ease in piecing the columns together:

1. Do NOT turn the blocks
2. Always start at the top of each column
3. Piece the columns from left to right

**Horizontal Assembly**

After the vertical columns are sewn together, its time for the horizontal rows.

1. PRESS every other seam - (horizontal row 1 to the left, horizontal row 2 to the right) as you sew each row, matching and “locking” seams.
2. The seams should easily lock into place when the seam allowance has been pressed in opposite directions.
3. After all horizontal rows are sewn, press your quilt top on the right side of the fabric pressing seams open or down.

**On Point Quilt Assembly and Layout**



For on point quilts, the camp pick-up method can be used. Instead of sewing columns, you sew rows that will start and stop with a setting triangle. The triangles on the top left and bottom right go on last after sewing the rows together.

**BORDERS**

Cutting width of fabric (WOF) strips and sewing together using straight seams is the most straightforward method for making borders. Detailed instructions for straight seams are given. Other options such as mitered joining or length of fabric borders are given below.

**Border Strips**

Cut the number of strips of fabric indicated in your quilt pattern. Cut off selvages. Lay two strips, right sides together and sew across one end. Sew all border strips together to make one long rectangle. Press seam allowances to one side.

**Determining Border Lengths**

Press your quilt top before measuring for borders.

The border is usually sewn on the longer sides of the quilt top first.

Using a metal measuring tape (fabric tapes might stretch giving a less accurate measurement), measure the length of your quilt top on the right, center and left (at least 3” from the edge so as not to stretch your quilt top). Add the three measurements and divide by 3 to get the average of the measurements. For example:

Left = 20.50

Center = 20.25

Right = 20.75

Total 61.50 / 3 = 20.5”

This measurement is the length of the quilt top and the length of right and left borders. Cut and make 2 border pieces this length.

**Pin Border Pieces to Quilt Top**

Fold quilt top in half to find the midpoint of the side. At the midpoint, place a pin perpendicular to the edge of the quilt top. Fold each half in half to find the ¼ and ¾ marks, and place pins perpendicular to the edge of the quilt top. In the same manner, fold and pin the border piece. Pin the border to the quilt top, right sides together, matching the ends and the pins. If desired, add additional pins being sure the border piece is evenly distributed on the quilt top. Repeat for the opposite edge of the quilt top.

Sew the lengths to the left and right sides of the quilt top with a 1/4” seam allowance. Press seams allowance toward the border, unless the pattern directs otherwise.

**Repeat for Top and Bottom Border Pieces**

Repeat **Determining Border Lengths** and **Pin Border Pieces to Quilt Top** for the top and bottom border pieces.

If more than one border is added, repeat the measuring process after each border is added to the quilt top.

**If You are Designing the Borders**

If your quilt pattern does not include directions for a border, you want borders a different width than the pattern calls for, or you want to add a border to make a quilt larger, start here. Borders are cut after the blocks are sewn together. They are viewed as the frame of the quilt. It is good to wait and see how the picture turns out before choosing the frame. You can have as many or few borders as you desire.

**Audition borders**

Lay a corner of your quilt top on top of the border fabric so the border fabric frames the quilt as if it were sewn on.  When you like the way it looks, measure the width of the border and add 1/2” for seam allowance.

**How much yardage do I need?**

If you are buying fabric for a border or shopping your stash, to be sure you have enough fabric for the desired border, measure the length and width of quilt top in inches. For straight seam borders, use this formula to calculate the number of WOF strips:



Now we’ll figure out how much fabric you’ll need.



For example, if your quilt measures 42 inches wide and 50 inches long, and you want a 4 inch wide border:



Cut the number of strips calculated above, then follow the instructions starting with **Determining Border Lengths.**

**Other Border Options and Tips**

Cutting width of fabric strips and sewing together using straight seams is the most straightforward method for making borders. There are other options that could be considered.

**Cut strips on length of grain**

Borders strips may be cut on the length of grain. The advantage is that borders will not be pieced, eliminating some potentially visually distracting seams.

Your fabric will act differently when cut on the length of grain than on the cross grain. The cross grain has more stretch to it. If cutting your borders on the length of grain using a fabric that is also found in the quilt top, the borders are cut before you cut strips for the quilt top to maximize the length available.

**Bias seams or mitered joining of border strips**

Biased Piecing is sewing strips together at an angle. This is usually less noticeable than a straight seam, especially when using solid fabric or large-scale prints. With this method there is no need to remove selvage before sewing. Bias seams will take more fabric. When figuring yardage for borders, rather than dividing by 40, divide by 40 minus the width of the border strips to determine the number of WOF strips needed. For 4” borders for a 42 x 50” quilt, 202” of border strips are needed. If the strips will be sewn together on the bias, each strip will yield 40 – 4 ½ = 35 ½”. Next, divide 202 by 35 ½ to get 5.69 strips. Round up to 6 strips.

With right sides together, arrange two border strips to form a right angle. Draw a line as shown in figure 1. Pin generously. Sew on the line. Open to check. Be sure the sides of the strip are straight as shown in figure 2.

figure 2

figure 1

Trim to 1/4” seam allowance. Press seams to one side or open. Continue to join strips in this manner until you have one continuous border piece.

**Corner Blocks**

To determine the length of the top and bottom borders, before sewing on side borders measure the quilt top width in three places. Cut 2 border pieces the average of three measurements. Sew a block onto both ends of top and bottom border pieces.

**Mitered Borders**

The corners of borders may be sewn together using an angled seam sewn on the bias of the fabric. This is an involved process. Please ask an instructor to assist you if your pattern includes mitered borders.

**BATTING AND BACKING**

When the quilt top is completely finished, it’s time to assemble the quilt. (NOTE: Some prefer to mark the quilt top for quilting before assembling the entire quilt. Others choose to wait until is basted together.)

**Backing**

Be sure your backing is larger than your quilt top. Depending upon the size of the quilt top, it can be 3-4 inches larger on EACH side. At least 4 inches if you are having it professionally quilted, **IF you are taking it to a quilter, stop here** and take your top and backing to the quilter. Most professional quilters will have batting for you to purchase.

**To prepare your quilt to quilt on your domestic machine:**

Lay your backing on the floor/tabletop, wrong side up. Tape it tightly to the surface using masking tape (1.5” minimum width suggested). Firmly smooth out the wrinkles so it is firm and taught, but NOT STRETCHED (too tight or too loose may result in puckering).

**Batting**

Batting comes in different thicknesses. We recommend using cotton batting for ease in handling.

Lay your batting over the backing. The batting should be the same size as the backing which should be at least 3-4 inches larger all the way around than your quilt top.

**Quilt Top**

Lay your quilt top on top of the batting. Straighten, smooth out, and tape tightly.

**Pin Basting**

To pin baste, use 1” rust resistant safety pins.

Starting in the middle, pin all three layers together from the center out to each edge (forms a cross (+)). Then in each quadrant, pin from the center out towards each corner. There should be a pin every 4” or so. Your outstretched hand should touch several pins. As you pin, be aware of how you intend to quilt the top and try not to pin where you know you will be quilting.

Tools to aid in the pinning process are either a grapefruit spoon or a “Kwik Klip”. Both are easier on your fingers if you have a large quilt to baste.

**QUILTING**

There are many different ways to “quilt” your quilt. There are several good books discussing each technique and we suggest you purchase one and/or take a class for further instruction.

**Hand Quilting** – a true labor of love.

**Machine Quilting** can be “in the ditch” (seams), free motion or following one of the special designs for machine quilting. Also having someone long arm your quilt.

When machine quilting, the top thread color depends on the effect you wish to achieve. You can match the thread color to the dominant color in the quilt top, use a contrasting thread, a neutral thread color, or a good quality invisible thread.

The bottom thread color (bobbin) does not need to match the top. You can choose a different color. NOTE: If you want to use an invisible thread, use a good quality one. Do NOT use invisible thread in the bobbin. Experiment first.

**Longarming** a quilt is a quite common practice now. This is an easy but more expensive way to get your quilt quilted. Make sure you have contacted the person and found out what they require for a quilt to be done.

**BINDINGS**

Sewing binding to the front of the quilt by machine, then to the back of the quilt by hand, gives a neat finish and works especially well when there are triangle points at the edge of the quilt top.

Because of the thickness of the quilt, it is helpful to use a walking foot to sew on binding. Trim your quilt so the edges are even and straight.

1. Measure the perimeter of your quilt. Add 10-15 inches. Divide this number by 40 to determine the number of binding strips needed.

2. Cut strips 2 ½”. Some quilters prefer 2 ¼” strips. The goal is to have the edge of the quilt fill the binding.**\*** (See considerations for thick quilts at the end of the this section.)

3. Sew strips together on the bias to form one long strip. Use the same method as shown in the **Border Options: Bias seams/mitered strip piecing** section. Bias seams are preferred to reduce the bulk in the seams.

4. With WRONG sides together, press the binding strip in half.

5. Leaving a 6-10” tail, begin to sew the binding to the quilt top starting near the middle of one of the quilt’s sides. Match the raw edge of the binding to the quilt top’s raw edge using a 1/4” seam.

6. Corners - we will make mitered corners. This produces a picture frame effect.

At the corner, stop stitching 1/4” from the corner edge. Leave the needle in the fabric, raise the presser foot, and turn the quilt 1/4 turn counterclockwise. (You will be ready to sew down the next side of the quilt.) Put the presser foot back down and back stitch off the edge of the quilt. Raise the presser foot and pull the quilt towards you slightly.



Bring the binding strip above the quilt so the raw edges are in line with the quilts raw edge (this will form a miter with the binding). Finger press the diagonal fold.



Fold the binding strip straight down so that the raw edges meet again. Keep the diagonal fold in place underneath. The folded edge on the binding should align with the top edge of the quilt.



Resume stitching at the top edge of the quilt.

7. Attach binding to the total quilt perimeter, mitering each corner.

8. Stop stitching 10-12” from the start of your stitching.

9. Overlap the two tail ends by the same amount as the width of your cut binding, cutting off the excess.
For example, if the binding was cut 2 ½” wide, binding tails should overlap by 2 ½”.

10. Open the binding tail on your left with the right side up. Open the binding tail on your right and place it on top of the left strip at a right angle, right side down.

Draw a line as shown in figure 1. Pin. Sew on the line. Open to check. Be sure the sides of the strip are straight as shown in figure 2.

Press or finger press the seam, trim the seam allowance to ¼”, then press
or finger press the binding in half.

figure 2

figure 1

corner of horizontal strip

11. Once the tails are joined, finish machine stitching the binding to the quilt.

12. If necessary, use a ruler and rotary cutter to trim away the excess batting and backing to approximately ¼ to 3/8” so the quilt will “fill” the binding.

13. From the front of the quilt, press the binding outward, away from the center of the quilt.

14. Fold the binding to the back of the quilt and hand stitch using a blind stitch to sew the the folded edge to back of the quilt.

**Other Binding Options**

**All by machine**

To attach binding completely by machine, sew the binding to the back of the quilt first, then fold the binding to the front of the quilt and machine stitch to the front of the quilt.

**Bias Cut Binding**

For quilts with curved edges, or to take advantage of a plaid or striped print, use bias cut binding. See the bias binding cutting handout. Because fabric is stretchy on the bias, handle bias cut binding with extra care. Pressing with spray starch before cutting can help prevent excess stretching.

1. Fold A (selvage) to B (cut)
2. Fold C to D
3. Fold E to F
4. Fold G to H

Trim ends where indicated and cut strips in desired width.

1 yard fabric yields approximately 450” of 2-1/4” wide strips.

|  |  |
| --- | --- |
| **Fabric Amount** | **Total Length of Binding** |
| 13 ½” square |  72” |
| 16 ½” square | 112” |
| 20” square | 162” |
| 23” square | 220” |
| 26” square | 288” |
| 29 ½” square | 364” |
| 32 ½” square | 450” |
| 35 ½” square | 544” |

**\*Considerations for Thick Quilts**

If using flannels, plush synthetic fabrics, or thick batting, you may want 3” or even wider binding strips. To accommodate a very thick quilt, a single-fold binding may be used. Single-fold binding is a binding that is one layer of fabric that is laid face down on the front of the quilt top, lined up with the raw edges, machine stitched and then turned to the back to hand stitch in place.

## Signing/Dating your Quilt

Don’t forget to sign and date your quilt. There are a variety of methods in signing and dating your work.

Check with your local quilt shop or your quilting friends.

***Happy Quilting!***