



Gammill Longarm Quilting Machine Pantograph Class

How To Use A Pantograph

**Tutorials and more resources at
www.HeartbeatQuilting.com.**

How to Use a Pantograph

1. Choose pantograph

- a. If you're just beginning, look for patterns that don't have any sharp angles and that don't travel back over themselves to achieve the best results.
- b. Directional?
 - i. If the pantograph is a directional pattern, be sure to [load your quilt](#) onto the machine appropriately.
- c. Sizing
 - i. Partial rows are typically unavoidable, but easy to remedy.
 - ii. You can use the pantograph sizes to find one that will mathematically fit the size of your quilt top, by considering the size of your quilt top, the size of your piecing, etc.
(Example: if your quilt top is 60" wide, the width of the pantograph is 10", which will allow you to quilt approximately 6 rows.)



Name
Width of
Pantograph Pattern
of Rows
Length of
Pantograph Paper

Next Row
Quilt Second
Quilt First
Previous Row

2. Load quilt onto machine. (Refer to class packet for full instructions.)

- a. Zip on backing.
- b. Place machine in basting mode.
- c. Thread baste batting in horizontal/vertical lock.
- d. Thread baste quilt top along top and sides.
 - i. You should never use pins to baste while using a pantograph. Your eyes will be looking at the pantograph, not your quilt top. This makes it too easy to break a needle by running over a pin.

3. Drop needle in upper left corner of quilt top using needle position button.



PATTY

*Ask staff to help change, if needed.
machine.*

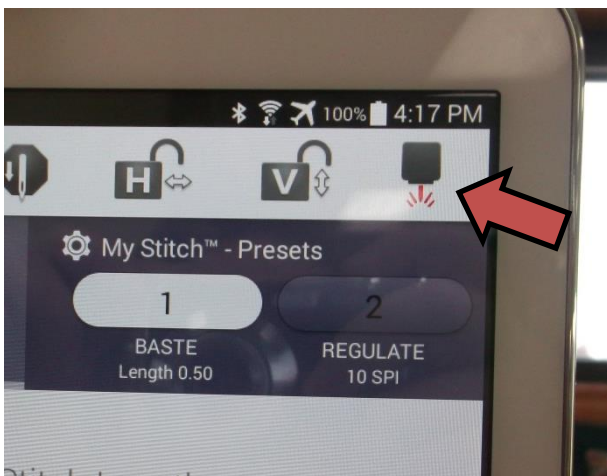


ROSIE/LUCY

*May need to do this on both front & back of
machine.*

4. Turn on laser light, if not already on.

a. The laser light on the back of the machine shows where the needle is positioned on the quilt top.



PATTY

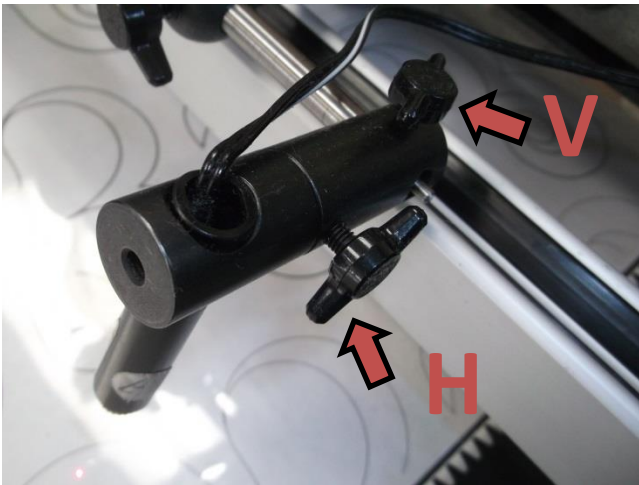
Red light should be on. Simply touch to turn on.



ROSIE/LUCY

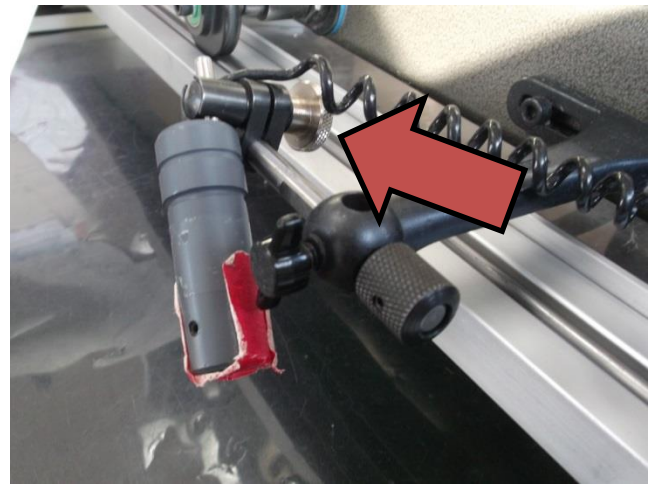
On back side of machine.

5. Go to the back of machine and load pantograph onto back table, under plastic cover.
 - a. Unroll pantograph with the Name on the right side.
 - b. Keep the paper pantograph lined up against edge of table.
 - c. Straighten out pantograph the full width of the back table.



PATTY

H adjusts horizontally. V adjusts vertically.

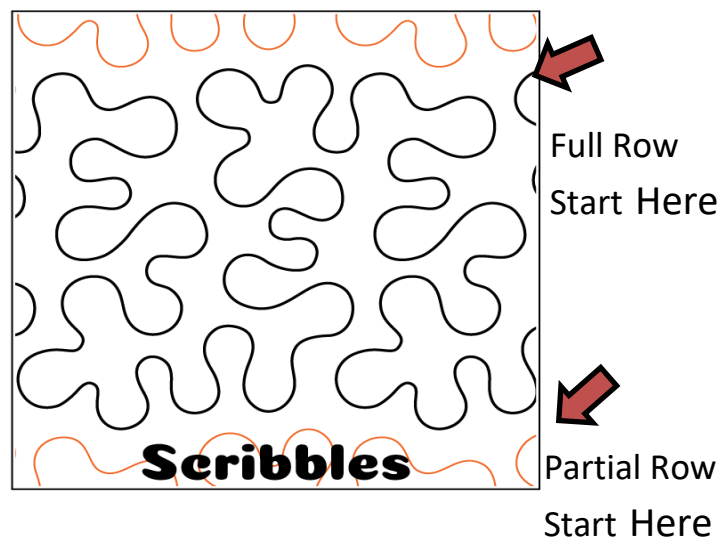


ROSIE/LUCY

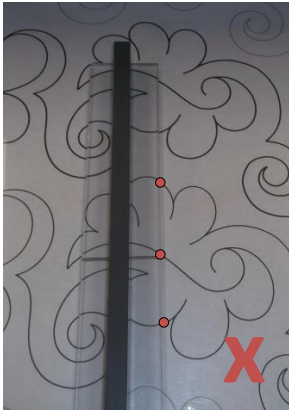
One knob adjusts both horizontal & vertical.

6. Adjust laser light to line up horizontally with the bottom edge of the pantograph.
 - a. Move laser light only, while keeping the machine head in one spot.
 - b. Be sure to adjust it to a spot that is comfortable for you to see from where you hold the machine.
 - i. You don't want to twist your back while quilting – you should stand straight up.

7. To line up vertically, move pantograph to the needle position of the machine and the laser light. Ideally, you would use the starting end of the paper design. If not:
 - a. You're looking for a point in the pattern where the edge of your quilt top only passes through the pattern once per row.



- b. Move pantograph left to right to access better points in the pattern.
 - i. Use the clear ruler to help, if needed.
- c. Keep paper pantograph lined up against edge of table.
- d. Double check your alignment before continuing.



If not lining up the design with the edge of pantograph, here are examples of where to line up and where not to. The objective is to have only one starting point and not multiple starts/stops.

- 8. It may be useful to select and mark starting points with a post-it note.
 - a. If pattern has multiple full rows, repeat for each row.
 - b. Review pattern path to fill in along starting side where needed.
 - i. Use post it notes to draw fill-in, if needed.

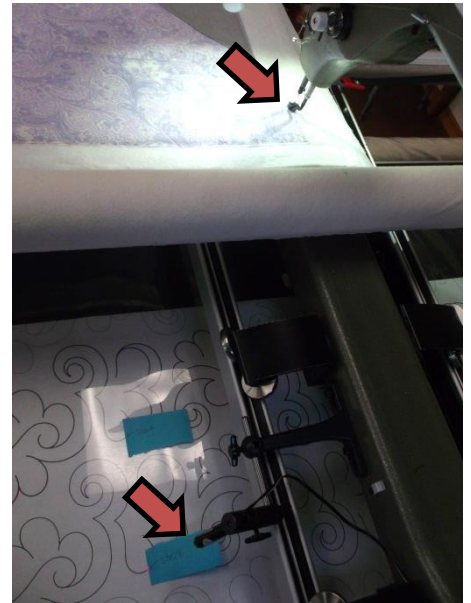


- 9. Move the machine head to the opposite end of the pantograph to mark the ending points. Using the clear ruler, select and mark ending point(s) with a post-it note.
 - a. If pattern has multiple full rows, repeat for each row.

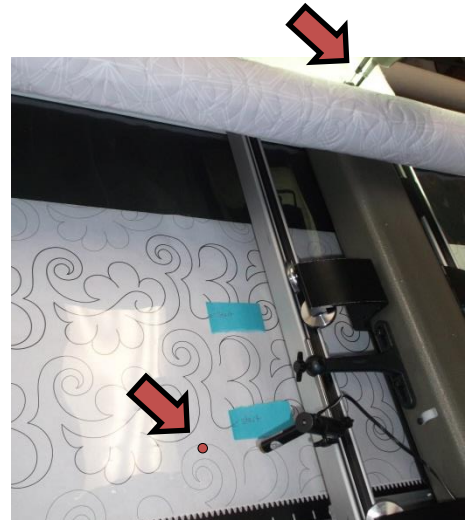
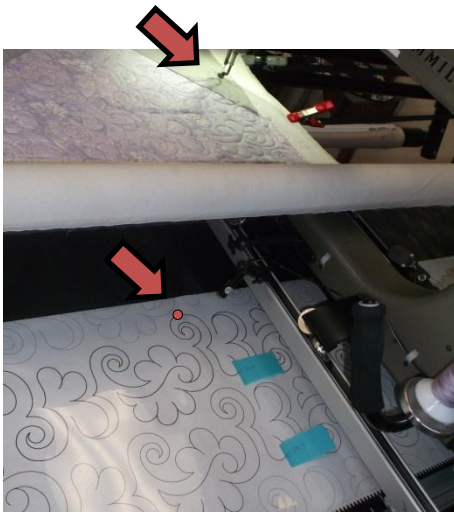


- b. Review pattern path to fill in along ending side where needed.
 - i. Use post it notes to draw fill-in, if needed.

10. Move machine head back to beginning. Drop needle in the first starting point.
 - a. Determine start point for the previous row.
 - i. The partial row at the bottom of the pantograph is the previous row.
 - ii. The partial row at the top of the pantograph is the next row.
 - b. If pattern does not have a previous row, drop needle using first full row's starting point.



11. Return to the front of the machine.
 - a. Bring up the bobbin thread, lock your stitches and trim thread tails.
 - b. Switch to regulated mode.
12. Return to the back of the machine.
 - a. Follow the path as practiced/drawn (*we recommend tracing the pantograph a few times before starting to quilt to get the muscle memory of the pattern going*).
 - b. Begin quilting!
13. Once you have reached your ending point, drop the needle.
 - a. Return to the front of the machine.
 - b. Lock your stitches, bring up your bobbin thread and trim.
14. Repeat steps 11-15 for any remaining full rows.
 - a. Once you've quilted all full rows, it's time to roll the quilt!
 - b. Most pantographs have one or two full rows.
15. On the front of the machine, drop the needle on the last fully quilted row, in the highest point closet to you on the quilt top.
 - a. This point should also be visible in your previous row, as this row will become your previous row when you roll.
 - i. Some companies mark these points to be helpful.
 - ii. Consider using an easily identifiable point.
16. Remove side clamps and/or belly bars.



17. With the needle dropped in the highest point on the quilt top, unlock the lower roller bar and while watching the laser light slowly roll the quilt so the laser light lines up to the same point on the partial row. (see photo above)
18. Lock the roller bars and reattach side clamps and/or belly bars.
19. Baste down the sides where needed and check height of back bar.
 - a. Adjust back bar height so that you can comfortably fit your hand between the back bar and machine head while over the quilt top area.
20. Repeat steps 12-20 until all full rows are complete.
21. When you've reached the end of your quilt top, chances are, it is a partial row.
 - a. Baste along the bottom edge of your quilt top before this next step.
 - b. To verify, sink the needle near the bottom edge of the quilt top and return to the back of the machine to see where the laser light lines up on the pattern. You will have two options.
 - i. If you have enough backing and/or don't mind quilting over the edge of your quilt, you could simply follow the full pattern for that row.
 - ii. If you do not have enough backing, or if you would rather, you could use a ruler to mark the horizontal line of the bottom of the quilt and skip the parts that aren't on the quilt top.
 - c. Quilt the last row using either the full row or partial row method as listed above.

- d. Whichever way you choose, once you've done your stopping stitches, check over the back of the quilt to look for any spot(s) you may want to revisit or any loose threads before removing it from the machine.

General Pantograph Tips

- Be **VERY CAREFUL** that you don't move the machine head while the needle is dropped in the quilt. You risk damaging your quilt and/or breaking a needle!
- Trace the pattern with your finger prior to quilting to lessen simple travel path mistakes.
- Don't try too hard to follow the pattern exactly – this can result in jagged lines as you try to quickly return to the path when you find yourself straying. Focus more on feeling the motions for smoother looking quilting.
- Try out quilting with your right hand only. You may find this position to be more comfortable. Just remember which buttons do what!
- Consider making your backing and batting larger and bringing some practice fabric for the first one or two rows.
- Remember to look over at the quilt top a few times during each row to be sure you don't run out of bobbin. This will prevent you from ghost quilting an entire row without any bobbin thread. (see picture to right)
- Since you've most likely run off all sides of your quilt top, it is recommended to do a stay stitch around the perimeter of the quilt, prior to trimming off your excess backing and batting. You can do this at the studio in regulated mode or at home on your standard domestic machine using a straight stitch.



- If you roll incorrectly, you do run the risk of either overlapping rows or large gaps between rows.
 - If you have a gap, you could simply fill in the space with an echo around the pattern, or line up and roll correctly and quilt over, then remove the stitches at home.
 - If you have an overlapping row, you could leave it as is, or line up and roll correctly and quilt over, then remove the stitches at home.
 - If you decide to remove stitches at home, it could be helpful to use chalk to mark which stitches you will be removing so you don't get confused.

