

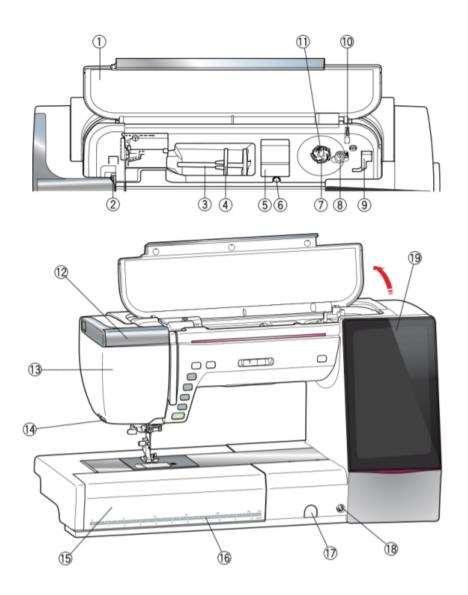
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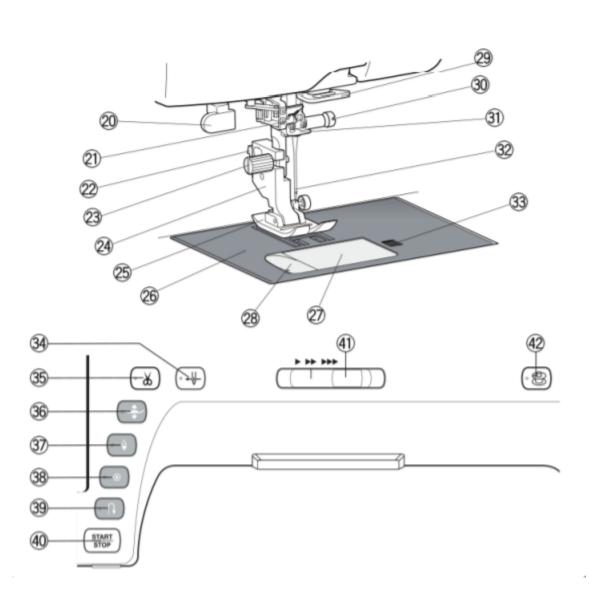
### LEVEL 1

#### **Objectives:**

To learn the basic functions of the embroidery machine and be able to thread and complete an embroidery pattern with supervision.

### 1. Identify parts of machine and their functions

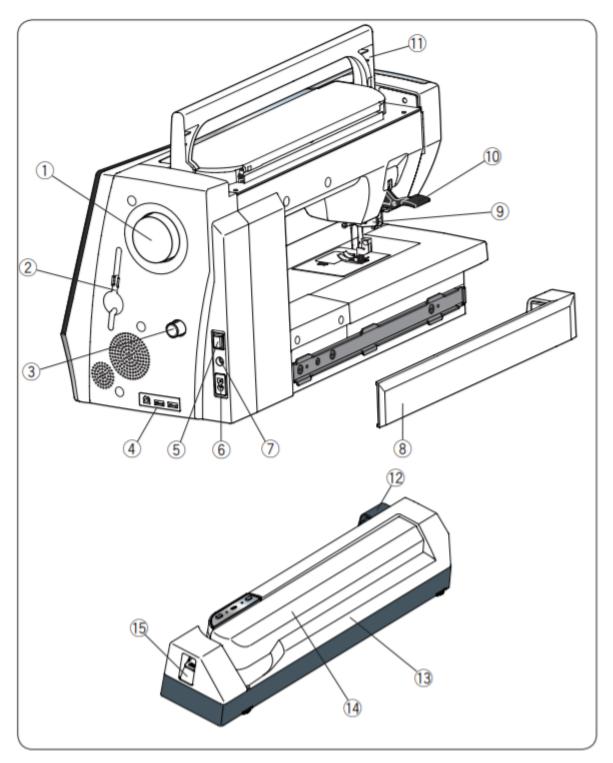




- 1. Top cover opens and closes to allow access to top compartment
- 2. Thread take-up lever Guide for thread after feeding it in thread channel guide (2nd/3rd steps)
- 3. Spool pin Holds spool of thread for sewing and winding bobbin.
- 4. Spool holder (large) disc used to keep thread spool in place while sewing
- 5. Foot compartment storage for presser foot that is not in use
- 6. Hole for additional spool pin For adding extra spool pin for two spool sewing.
- 7. Bobbin thread cutter A bladed flange used to cut bobbin thread during winding

- 8. Bobbin winder stopper Stops bobbin from winding when full.
- 9. Foot compartment (for P foot) storage compartment for embroidery foot P
- **10. Bobbin thread cutter B** blade used to cut bobbin thread after it is finished winding
- 11. Bobbin winder spindle Holds bobbin when filling it
- 12. Retractable light additional LED light
- 13. Face plate Outside plate of machine
- 14. Thread cutter/holder used to cut extra thread or hold the tail of a thread during embroidery
- 15. Extension table Removable extension table which holds extra accessories
- 16. Centimeter/inch measurements used for measuring fabric
- 17. Feed balancing dial cap can be turned left or right to correct deformed stitches
- 18. Knee lifter socket socket where knee lifter is inserted
- 19. Visual touch screen Touch screen used to operate the embroidery machine
- **20. Buttonhole lever** A retractable lever that is used to indicate button hole size when using the automatic buttonhole foot R
- 21. Automatic needle threader mechanism that automatically threads the machine needle
- 22. Lever Presser foot lever. Press inwards to change presser foot type.
- 23. Thumbscrew Loosen to replace the presser foot holder.
- 24. Presser foot holder Holds presser foot in place; loosen to change kind of foot.
- 25. Presser foot Presses down fabric onto feed dogs while sewing
- **26. Needle plate** Plate for guiding, sewing, and covering the bobbin with hole for the needle
- 27. Hook cover plate Covers bobbin well
- 28. Thread cutter Covered blade used to cut bobbin thread
- **29.** Lower thread guide Guides thread after feeding it through thread channel (6th step in threading)
- 30. Needle clamp screw Loosen to change needle

- **31. Needle bar thread guide** Guides thread to needle after feeding it through lower thread guide (7th step)
- 32. Needle Machine needle, size dependent on fabric type.
- **33. Hook cover release button** Opens hook cover plate to place and replace bobbin.
- 34. Needle threader button Threads the needle through the needle eye
- **35. Thread cutter button** Cuts the bobbin thread and top thread when sewing or embroidery is complete
- 36. Presser foot lifter button Raises and lowers the presser foot
- 37. Needle up/down button Raises and lowers the needle bar
- **38.** Auto-lock button Enables the machine to sew locking stitches at the beginning and end of stitches
- 39. Reverse button Pressing allows machine to sew in reverse with certain stitches
- **40. Start/stop button** Pressing starts or stops the machine. Can be used in ordinary sewing mode and embroidery mode. Cannot be used during ordinary mode when the food pedal is connected.
- **41. Speed control slider** Slider used to control the sewing speed of the machine. Can be adjusted while sewing.
- 42. Bobbin winding button Press this button to wind the bobbin.



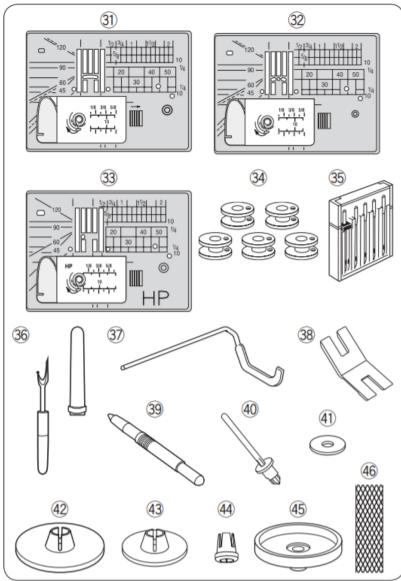
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- 1. Hand wheel Used to turn needle by hand.
- 2. Touch panel stylus holder Holds touch screen stylus
- 3. Dual feed balancing dial Used to adjust dual feed balance depending on fabric
- 4. USB ports Plug in USB drives to upload custom designs to the machine
- 5. Power switch Turns the machine on and off
- 6. Power inlet Socket to plug power cord into machine
- 7. Foot control jack Provides power to the optional foot control
- 8. Cover Covers embroidery attachments when embroidery unit is not attached
- 9. Dual feed drive Drives the dual feed presser foot when attached
- 10. Presser foot lifter Switch for manually raising and lowering the presser foot
- 11. Carrying handle Handle to carry the machine
- 12. **Embroidery unit socket** Plugs into the machine to provide power to the embroidery unit
- 13. Embroidery unit Enables the use of the embroidery function
- 14. Carriage arm Holds embroidery hoop clamp
- 15. Carriage arm release lever Press down to release the carriage arm and allow it to open

#### **Standard Accessories:**

- 31. **Needle plate** Covers feed dogs and bobbin well; used with standard sewing
- 32. Straight stitch needle plate -Needle plate used for embroidery
- 33. Professional grade needleplate For use with theprofessional grade foot
- 34. Bobbin x5 For bottom thread
- 35. Needle set Spare needles
- 36. Seam ripper/Buttonhole
  Opener Used to fix mistakes and open buttonholes
- 37. Quilting guide bar Helpful when sewing parallel, evenly spaced rows of stitches
- 38. Button shank plate Used when attaching shank buttons
- 39. Touch panel stylus For interacting with the machine touch screen
- 40. Additional spool pin Holds a second thread spool when dual feed sewing
- 41. Felt Keeps spool of thread from grinding
- 42. Spool holder (large) For holding large spools on thread pin



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- 43. Spool holder (small) For holding small spools on thread pin
- 44. Spool holder (special) For holding a specific sized spool of thread
- 45. Spool stand Use when needing to wind a bobbin during an embroidery project
- 46. Net Keeps spool from unwinding

### 2. Safety Guidelines

- Machine use is for customers Grade 9-Adult.
- Use only the attachments, power cord, and accessories that come with the machine.
- Never operate machine if the power cord is frayed or damaged in any way.
- Do not move the machine.
- Keep your fingers away from all moving parts.
- Use proper needle plate; do not use bent needles.
- Always press lockout key when adjusting needle or presser foot, threading the bobbin or needle.

# 3. Setting up the machine -- Needle plate, carriage arm, and presser foot

- **Needle plate:** To use the machine in embroidery mode, make sure the correct needle plate is set on the machine. You will need to use the straight stitch (s.s.) needle plate. If there is another type of plate set on the machine, let a staff member know.
- Carriage arm: Press down the carriage arm release lever to extend the carriage arm, then swing out the arm until it locks in the fully extended position. Do not push on the carriage arm when it is extended. Do not forcefully move the carriage or carriage arm by hand. Do not hold the carriage or carriage arm while it is moving. Doing so may damage the carriage mechanism.
- **Presser foot:** Use the embroidery foot P for embroidery. If a different presser foot is attached to the machine, let a staff member know.

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### 4. Bobbin preparation

#### 1. Setting the spool

- a. Place a spool of thread on the spool pin with thread winding underneath and toward the front of the machine. **Make sure you are using Janome bobbin thread to wind the bobbin**. (see page 12 in the manual)
- b. Add spool holder to keep thread in place

#### 2. Winding the bobbin

- a. Pull the thread from the spool. Hold the thread with both hands and pass the thread into the guide slot. Draw the thread to the left and forward around the thread guide.
- b. Draw the thread to the rear and to the right around and under the guide plate. Firmly pull the thread to the right while holding it with both hands.
- c. Put the bobbin on the bobbin winder spindle. Pass the thread to the bobbin. Hold the thread with both hands and wind it around the bobbin clockwise several times. Use the bladed flanges on the bobbin winder to cut excess thread.
- d. Push the bobbin stopper to the left.
- e. Press the bobbin winder button. The visual touch screen will show the bobbin winding sign. When the bobbin is fully wound, it will stop spinning and the bobbin stopper returns to its original position automatically.
- f. Remove the bobbin. Cut the thread with scissors, or with bobbin thread cutter B.

#### 3. Inserting the bobbin into the machine

- a. Press the lockout key. Place the bobbin in the bobbin holder with the thread running off counterclockwise; it should look like a p.
- b. Hold the bobbin with your fingertip so it does not rotate. Guide the thread into the front notch of the bobbin holder. Pull the thread to the left to pass it under the guide.
- c. Draw the thread to the left to pass it into the guide path marked "1". Make sure that the thread comes out from the side notch of the bobbin holder. Continue to draw the thread along the guide path marked "2" and pull the thread to the right through the slit. The thread will be cut to the proper length and held in place.
- d. Set the hook cover plate back in place. Unless otherwise specified, you do not need to bring up the bobbin thread before sewing.

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### **5. Preparing your fabric for embroidery**

All fabric types need a stabilizer before being embroidered. This prevents the fabric from stretching under the needle, and ensures the best embroidery quality. We are going to use tear-away fabric stabilizer.

Attaching the stabilizer:

- 1. Cut the stabilizer larger than the embroidery hoop
- 2. Spray a thin layer of adhesive on the **wrong side (back side) of the fabric** and let it dry for 3-5 minutes.
- 3. Attach the stabilizer to the wrong side of the fabric, smoothing it out and pressing in several spots to ensure it is attached.

### 6. Setting the fabric in the embroidery hoop

- 1. The fabric and stabilizer should be larger than the embroidery hoop.
- 2. Draw the centerlines on the fabric with tailor's chalk. If you do not need to center the design on the fabric, skip this step.
- 3. Lay the inner hoop and template on the fabric, matching the centerlines of the fabric with the template.
- 4. Loosen the hoop tightening screw on the outer hoop. Place the inner hoop and fabric on the outer hoop.
- 5. Push the inner hoop and fabric into the outer hoop. Tighten the screw on the outer hoop to stretch the fabric. Make sure that the fabric is stretched tightly in the hoop. Remove the template.
  - a. Clamp the fabric to the hoop with the short magnetic clamps when using hoop SQ23 or hoop GR. Use the long magnetic clamps when using hoop ASQ22.
- 6. We will be using hoop FA10, which has a 100x40mm embroidery area.

### 7. Attaching the embroidery hoop to the machine

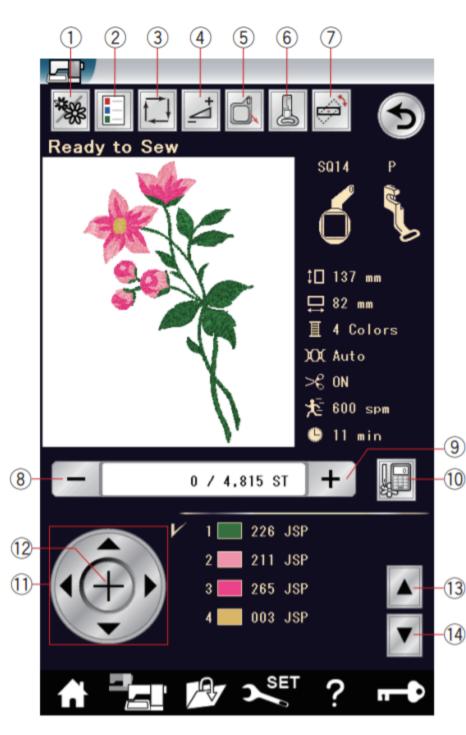
- 1. Place the hoop on the machine and gently attach the hoop to the carriage by inserting the lock pin of the hoop into the hole in the carriage.
- 2. Turn the knob clockwise to secure the hoop.

### 8. Choosing an embroidery design

- 1. Using the stylus, press the built-in design key (the yellow flower) and the first page of the design list of World of Embroidery designs will open.
- 2. Press the hoop selection key to browse the designs by hoop size.
- 3. Choose a design from the pages that come up.

### 9. Ready to sew window

The ready to sew window shows the embroidery function keys and information on the selected pattern.



#### **Function Keys:**

1. **Color selection** - Toggles between colors in the design

2. **Color list** - Lists the thread colors and number

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3. **Trace** - Checks the size of the embroidery area by tracing the pattern outline without stitching or with basting stitches

4. **Adjust** - Opens the manual setting window

5. **Hoop back** - returns the embroidery carriage back to home position

6. **Embroidery foot** - Choose which foot is being used

7. **Fine position/angle adjustment** - Used to make fine adjustments to the position or angle of the design

8. **Stitch back** - Moves the hoop back to a previous sewing point

9. **Stitch forward** - Moves the hoop ahead

10. **Jump** - Tells the machine to jump to a specific sewing point using stitch numbers

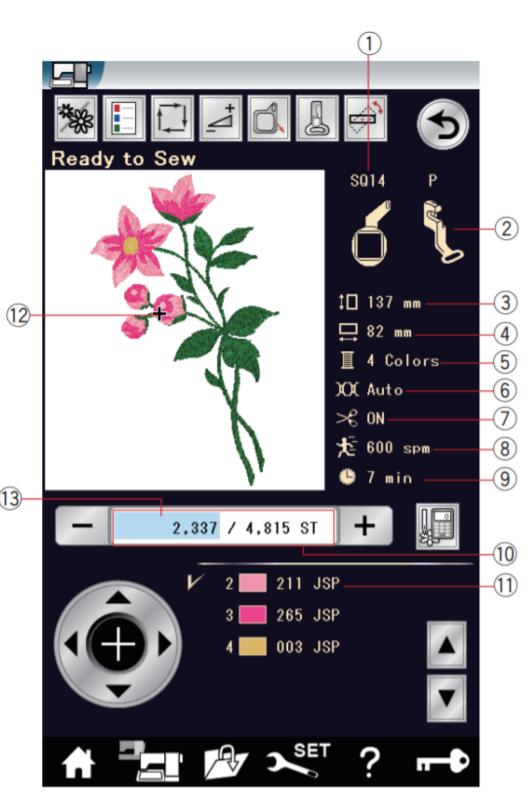
11. Jog - adjusts the hoop position

12. **Cross** - displays current sewing point

13. **Previous color section** - Views the previous color section

14. **Next color section** - Views the next color section

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#### Pattern Information:

1. **Hoop size** - Indicates which hoop is selected

2. **Presser foot type** -Indicates which presser foot is selected

3. Vertical dimension of the design - The height of the pattern in MM

4. Horizontal dimension of the design - The width of the pattern in MM

5. Number of thread colors (layers) - How many color sections there are in the design

6. **Tension settings** - Indicates the thread tension

7. Auto thread cutting -Indicates if the auto thread cutter is on or off

8. **Maximum sewing speed** - Indicates the current speed setting

9. **Required sewing time** -Amount of time the design will take to complete

10. **Stitch count** - Total number of stitches in design

11. **Thread color** - Currently selected color section

12. Cross mark - Indicates current sewing point

13. **Progress bar** - Displays how far along the design is

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### 10. Preparing to embroider

Now that you have selected a design, thread the machine with the color for the first section.

#### Thread the machine:

- 1. Press the needle up/down button to raise the take-up lever to the highest position. Press the lockout key to lockout the machine. The presser foot will go down and the upper thread tension disks will open.
- 2. Make sure the spool of thread is set on the spool pin with thread winding underneath and toward the front of the machine. Thread the machine in order from 1 to 7, using the illustrations on the machine to guide you. Hold the thread with both hands and pass the thread into the guide slot (step 1).
- 3. Hold the thead with both hands and draw the thread around the corner of the guide. Firmly pull the thread toward you along the right channel until the thread snaps (2).
- 4. Draw the thread down along the right channel and around the bottom of the thread guide plate. Pull the thread up along the left channel (3).
- 5. While holding the thread at the spool, firmly draw the thread up and to the back of the take-up lever. Draw the thread forward to draw it into the eye of the take-up lever, making sure the thread is feeding from right to left (4).
- 6. Then pull the thread down along the left channel and through the lower thread guide. Slide the thread from the right of the needle bar thread guide to the left (5).
- 7. Draw the thread through the slit of the needle threader. The thread should pass under the hook (6).
- 8. Pull the thread up and slip it between the thread cutter and face plate from behind (7).
- 9. Press the needle threader button. The thread will be automatically threaded through the needle eye. Pull the thread loop to take the thread end out through the needle eye to the rear.

Once the machine is threaded, it is time to start the design. Make sure there is nothing blocking the embroidery carriage from moving around, and that the hoop is properly attached.

#### Starting to embroider:

- 1. If you added center marks, use the jog key to position the needle right above the center of the centerlines on the fabric.
- 2. Press the green start/stop button and sew 5 to 6 stitches. The start/stop button will turn red while the machine is embroidering. Press the start/stop button again to pause the machine. The presser foot will be raised automatically. Cut the loose thread close to the beginning of the starting point to avoid the machine sewing over it.
- 3. Press the start/stop button to start sewing again. The machine will embroider until it has finished the currently selected color section. Once done, it will stop and cut the thread automatically.

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4. If you are embroidering a design with multiple color sections, change the thread after the machine stops at each section, then press start/stop to resume the pattern. Do this until your pattern is complete.

#### Removing the hoop:

- 1. Once the machine has finished the design, it will cut the thread and automatically raise the presser foot.
- 2. Turn the knob on the hoop counterclockwise and carefully remove the hoop, taking care not to run into the presser foot or needle.
- 3. Remove your fabric from the hoop by loosening the screw and taking out the inner hoop.

## LEVEL 2

#### **Objectives:**

- To become familiar with the Janome Artistic Digitizer software
- To learn the basic functions of the sewing mode and be able to thread and sew a quilting stitch without supervision

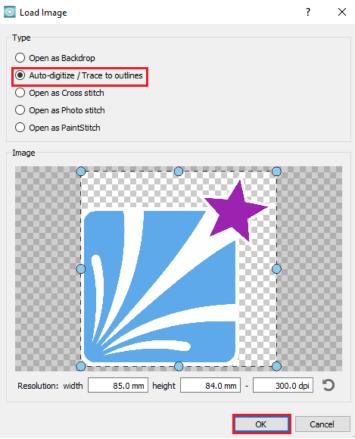
### 1. Digitizing an Image with Janome Artistic Digitizer

- This software includes text editing, digitizing options, embroidery design editing, and more.
- Digitizing involves converting a PNG or JPG to stitch paths. SVG files do not need to be digitized.
- 1. Double click the Janome Digitizer icon.
- 2. When prompted, click "Activate" in the software key activation window.
- 3. If the activation was successful, you will get the message "key updated successfully." If the activation wasn't successful, let a staff member know.
- 4. Close the software key activation window. Double click on the Janome Digitizer icon again.
- 5. The Janome Digitizer has over 100 tutorial videos for the software. These can be accessed on the Janome Youtube channel, or through the tutorials bar on the right side of the software home screen.
- 6. To digitize an image, click the "open" icon on the left side.
- 7. Navigate to your image. If the image type is an SVG, it will be digitized automatically.

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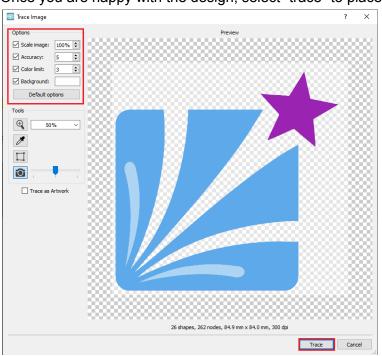
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8. Select "auto-digitize/trace to outlines," then select "OK."



9. You can adjust the scaling of the design, the accuracy of the trace, the amount of colors traced, and remove the background in the next step. In the new window, select "scale image," "accuracy," "color limit," and "background" in order to change these settings.

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10. Once you are happy with the design, select "trace" to place it.

11. From here, you can edit and customize the stitches order, design colors, etc. to your liking.

### 2. Switching to sewing mode

- To use the Janome Memory Craft to sew items such as quilts, it must first be in the sewing mode. If you are switching from embroidering to sewing, let a staff member know. Do not attempt to change the needle plate and presser foot.
- 1. Make sure the hoop has been removed, and that the carriage is in the home position. (refer to page 131 in the manual)
- 2. Push down the carriage arm release lever to retract the carriage arm and lock it into place.
- 3. Using the stylus, press the mode switch key (second icon from the left along the home row) to switch to ordinary sewing mode.
- 4. Wait for a staff member to change the presser foot and needle plate to the correct types before moving on.
- 5. Once the correct needle plate and presser foot is on the machine, thread the machine and insert the bobbin.

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- 6. A large variety of stitches are available on the machine. For the purpose of this badging, we are going to choose a stitch from the Quilt (Q) section.
- 7. Once you have selected a stitch, place your fabric under the presser foot and lower the presser foot by pressing the presser foot lifting switch. Press the start/stop button to start sewing. Press the locking stitch button when you are done with your stitch, then press the thread cutter button to cut the top and bottom threads.
- 8. Press the presser foot lifting switch and pull the fabric gently to the back of the sewing machine.

### **Troubleshooting (see pages 170-172)**

- Thread breaks
  - The needle thread is not threaded properly
  - The needle thread tension is too tight
  - The needle is bent or blunt
  - The needle is inserted incorrectly
  - The thread is too heavy for the needle
  - The needle thread was not set in the thread holder when embroidery sewing started
- Bobbin thread breaks
  - The bobbin thread is not threaded properly in the bobbin holder
  - Lint has collected in the bobbin holder
  - The bobbin is damaged and does not turn smoothly
- Needle breaks
  - The needle is inserted incorrectly
  - The needle is bent or blunt
  - The needle clamp screw is loose
  - The needle thread tension is too tight
  - The needle is too fine for the fabric being sewn
  - The fabric was pulled toward you when sewing free motion quilting with the free motion quilting open-toe foot QO.
- Skipped stitches
  - The needle thread is inserted incorrectly
  - The needle is bent or blunt
  - The needle and/or thread are not suitable for the fabric being sewn
  - A blue needle is not being used for sewing stretch, very fine or synthetics.
  - The needle thread is not threaded properly
  - The needle is defective (rusted, burr on needle eye or tip)
  - The embroidery hoop is not set properly

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- The fabric is not stretched tightly enough on the embroidery hoop
- A purple needle is not being used for sewing thick fabrics, denims, and across the hem
- Seam puckering
  - $\circ$   $\;$  The needle tension is too tight
  - The needle thread or the bobbin thread is not threaded correctly
  - The needle is too heavy for the fabric being sewn
  - The stitch length is too long for the fabric
  - The stitch width is too wide
  - The fabric is not stretched tightly enough on the embroidery hoop
- The cloth is not feeding smoothly
  - The feed dog is packed with lint
  - The dual feed foot is not being used for sewing hard to feed material
  - The stitches are too fine
  - The feed dog is lowered
- The machine does not run
  - The machine is not plugged in
  - A thread is caught in the hook race
  - A faulty foot control is plugged in while the machine is turned on (buzzer sounds once when plugin in)
  - A start/stop button is used for ordinary sewing with the foot control plugged in
- Patterns are distorted
  - The needle thread tension is too loose
  - The stitch length is not suitable for the fabric being sewn
  - Feed balancing dial is not properly set
  - Interfacing is not used for sewing stretch and very fine fabrics
  - The embroidery hood attaching knob is loose
  - The embroidery hoop is hitting something around the machine
  - The fabric is not stretched tightly enough on the embroidery hoop
  - $\circ$   $\;$  The fabric is caught or trapped when sewing embroidery
  - The embroidery foot is trapped by a jump thread
  - The embroidery foot stumbles on a mound of embroidery threads

### 2. Sign the MakerLab Agreement

### 3. Receive the Embroidery Machine Badge

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Congratulations! You are now ready to operate the Janome Memory Craft independently and to demonstrate the functions of the machine to IdeaSpace visitors! **To use the embroidery machine independently, you must bring your own fabric and supplies.** 

### 4. Supplies and Resources

#### Thread

- 40 weight polyester thread (#40)
  - Standard use thread
  - Good for designs with a moderate amount of detail and letters larger than 6mm.
- 60 weight polyester thread (#60)
  - Special use thread
  - Used on designs with intricate details or letters smaller than 6mm but larger than 3mm.
- 75 weight polyester thread (#75)
  - Special use thread
  - Used on designs with the most intricate details or filigree embroidery. Ideal for letters down to 2.5mm.

#### Stabilizer

- Tear-Away (self-adhesive or glue-on)
  - Tear-away is applied with spray adhesive or is self-stick.
  - Ideal for use with stable woven fabrics such as denim, canvas, woven jacket backs, and other stable fabrics. It helps with hooping and provides stability during the embroidery process.
- Iron-on
  - $\circ$   $\,$  Iron-on stabilizer is applied to the fabric with an iron.
  - Ideal for use with non-stable fabrics such as knits, sweaters, fleece, and other fabrics with stretch. Iron-on embroidery stabilizers provide a softness that reduces irritation when worn next to the skin. Excess stabilizer is cut off after the embroidery is finished.
- Water-soluble
  - Water-soluble stabilizer is self-stick.

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 Ideal for lace, patches, emblems, appliqué, napkins, fleece, and delicate fabrics. Can also be used for Cutwork Embroidery. Perfect for applications where the back side is visible and requires that the stabilizer be removed completely.

#### These supplies can be purchased at Walmart, JoAnn Fabrics, and online.

#### Helpful links:

- <u>https://www.madeirausa.com/</u>
   Provides excellent guality embroidery supplies and tools
- <u>https://sulky.com/</u>
  - Provides excellent quality embroidery supplies as well as free guides and resources