MELCO EMT16+

STUDENT INNOVATION CENTER
ROOM 2222

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VERSION 1.0

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OVERVIEW

The purpose of this document is to provide standard operating procedures for the use of the Melco EMT16+ digital embroiderers in room 2222 of the Student Innovation Center.

Please note: This document does not provide in-depth instruction on using Design Shop software.

Prior to engaging in hands-on training and operation, these required training modules MUST be completed:

- Shop Safety Fundamentals
- Fire Safety and Fire Extinguisher Training
- Hazard Communication Training (aka Worker Right to Know)
- Portable Power Tool Safety

HEALTH & SAFETY INFO

Mechanical Hazards: Moving parts must be guarded to prevent accidental contact. Guards must never be bypassed.

Ultraviolet Light (UV) and Laser: UV and laser light poses a radiation hazard that can cause damage to vision and skin. Do not look directly at the laser pointer.

Electrical: Contact with energized parts can lead to injury or even death. Before each use, inspect the 3D printer for any damaged wiring and safeguards. Do not use the printer if problems are found. Ensure the printer is properly grounded and plugged directly into an outlet.

HAZARD CONTROL MEASURES AND REQUIRED PPE

REQUIRED PPE:

- Safety glasses
- Closed toed shoes

Hazard Control Measures:

- Wait until the embroiderer is completely finished before removing parts/material
- Tie long hair back
- The needle moves incredibly fast. Under no circumstances should you reach into the work area while the needle is moving.
- Only use material approved by Shop staff.
- The needles are sharp. Be careful when loading/unloading hoops/materials into the clamping system of the embroiderer.
- No food/drink is allowed near the machine of computer.

FIRST AID PROCEDURES

BURNS: Minor burns are typically small, red, have swelling, and can blister. Cool burns with cold water and continue until the pain lessens. After cooling, cover with a dry, sterile bandage or clean dressing. Consult a physician as needed.

CUTS/SCRAPES: Minor cuts and scrapes usually stop bleeding on their own. If needed, apply gentle pressure with a clean bandage or cloth and elevate the wound until bleeding stops. Clean the wound and apply bandages. Consult a physician as needed.

PINCH/CRUSH: Consult a physician as needed.

INHALATION: Ensure there is proper ventilation prior to use. If needed, stop the procedure and move to a well ventilated area. Consult a physician as needed.

EYES: Immediately irrigate the eyes at an eyewash station for at least 15 minutes. Hold the eyelids away from the eyeball, moving eye in all directions to wash thoroughly behind the eyelids. Consult a physician as needed.

All accidents and injuries occurring at work or in the course of employment must be reported to the employee's supervisor as soon as possible (even if no medical attention is required). http://www.ehs.iastate.edu/occupational/accidents-injuries

WASTE DISPOSAL

For all scraps and waste material that is too small to re-use, dispose of in the trash.

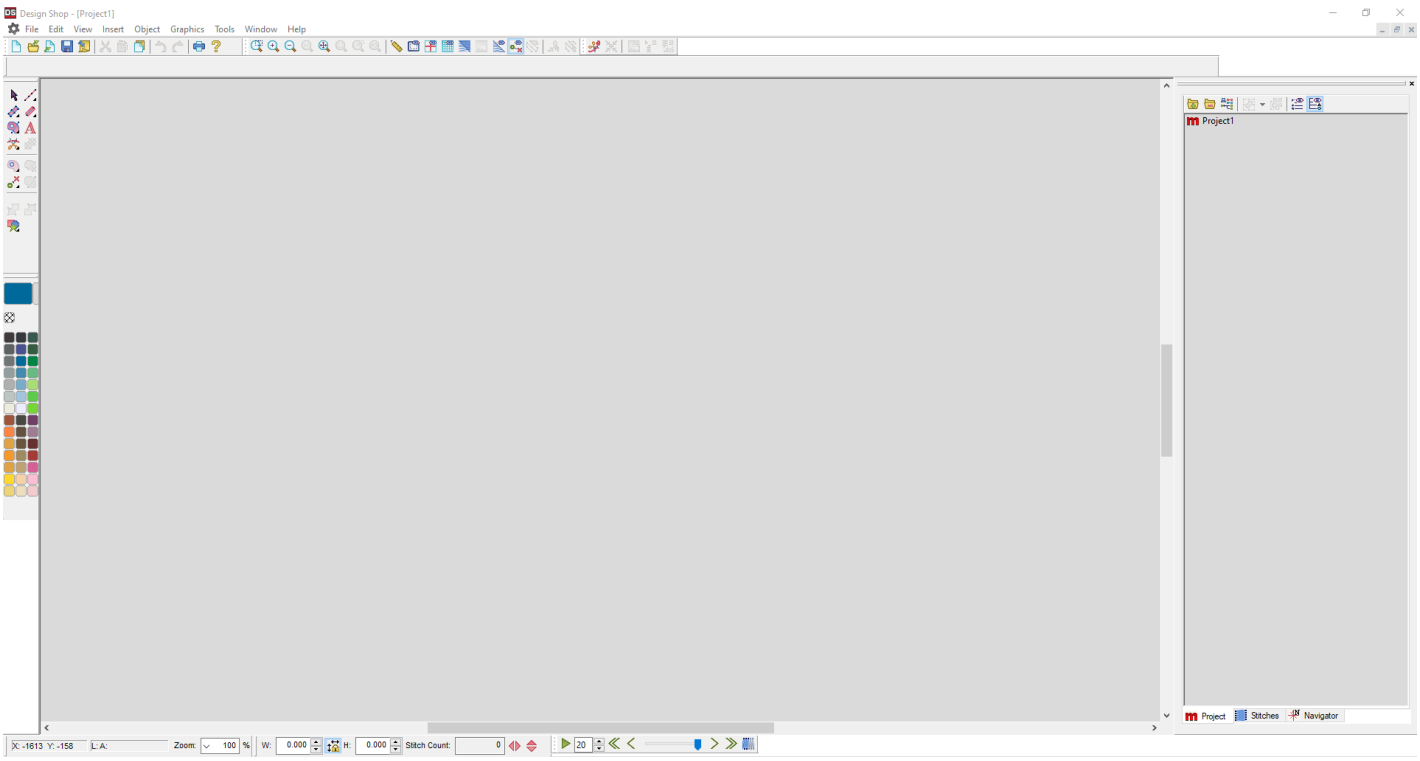
If there is enough material left over for other jobs and you do not wish to keep it, you may donate it to the scap bin for other users.

SPILL/CLEAN UP PROCEDURES

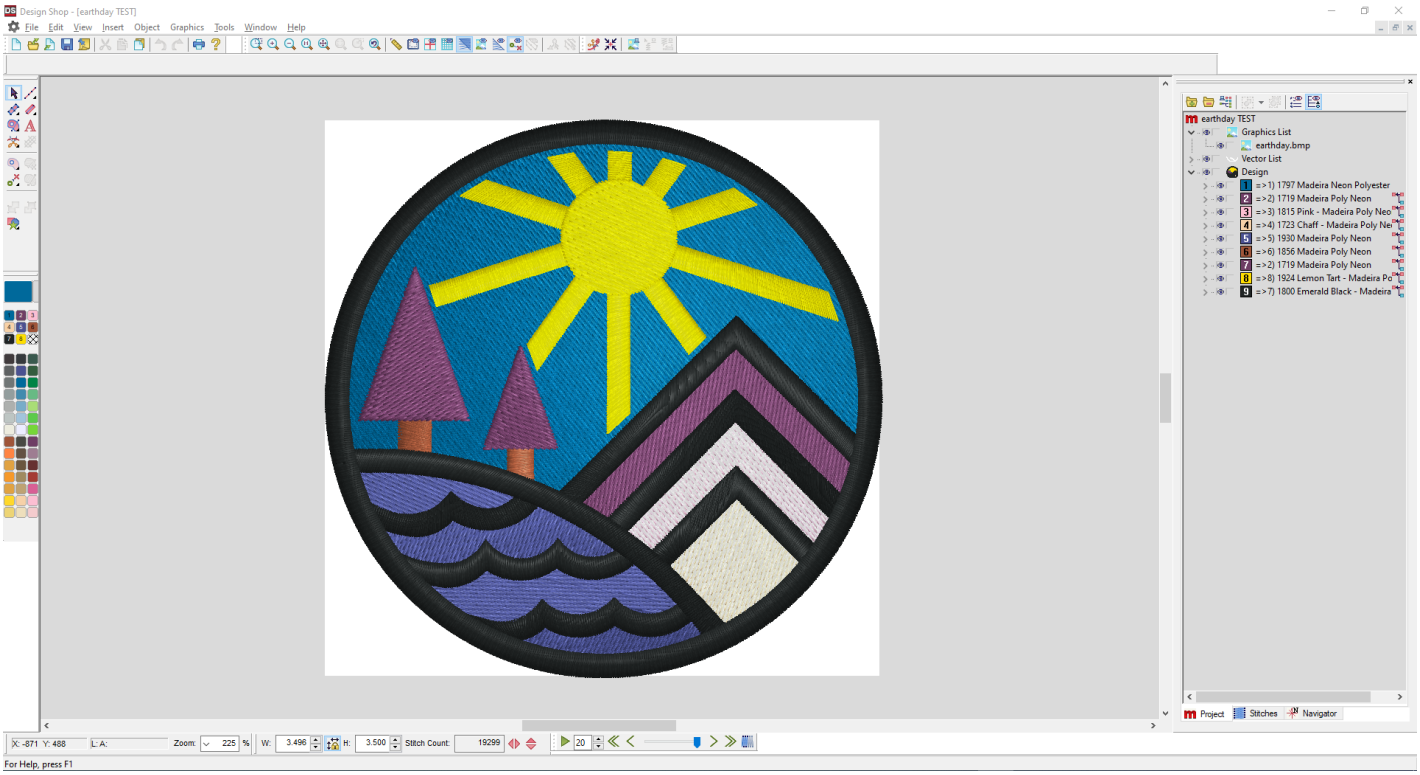
Allow both the machine to come to a complete stop before attempting to clean any spills. After machine stops, use paper towels for any spots of oil that may have leaked and use a lint-free cloth for any dust/lint that may need to be cleared from the machine.

OPERATIONS GUIDE

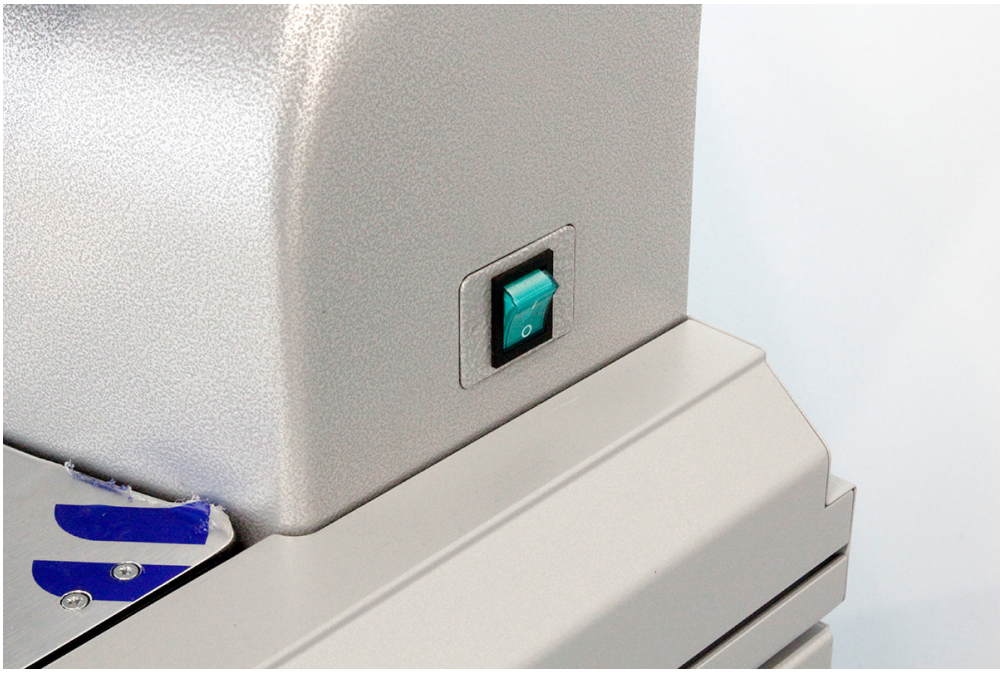
1. Open Design Shop

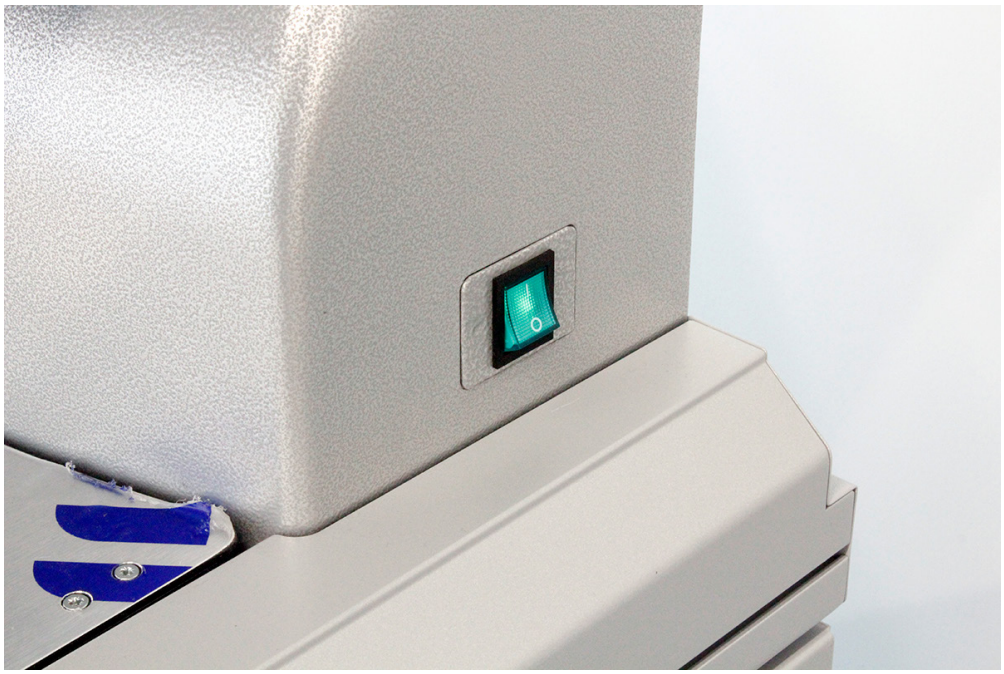


2. Get your job ready in Design Shop



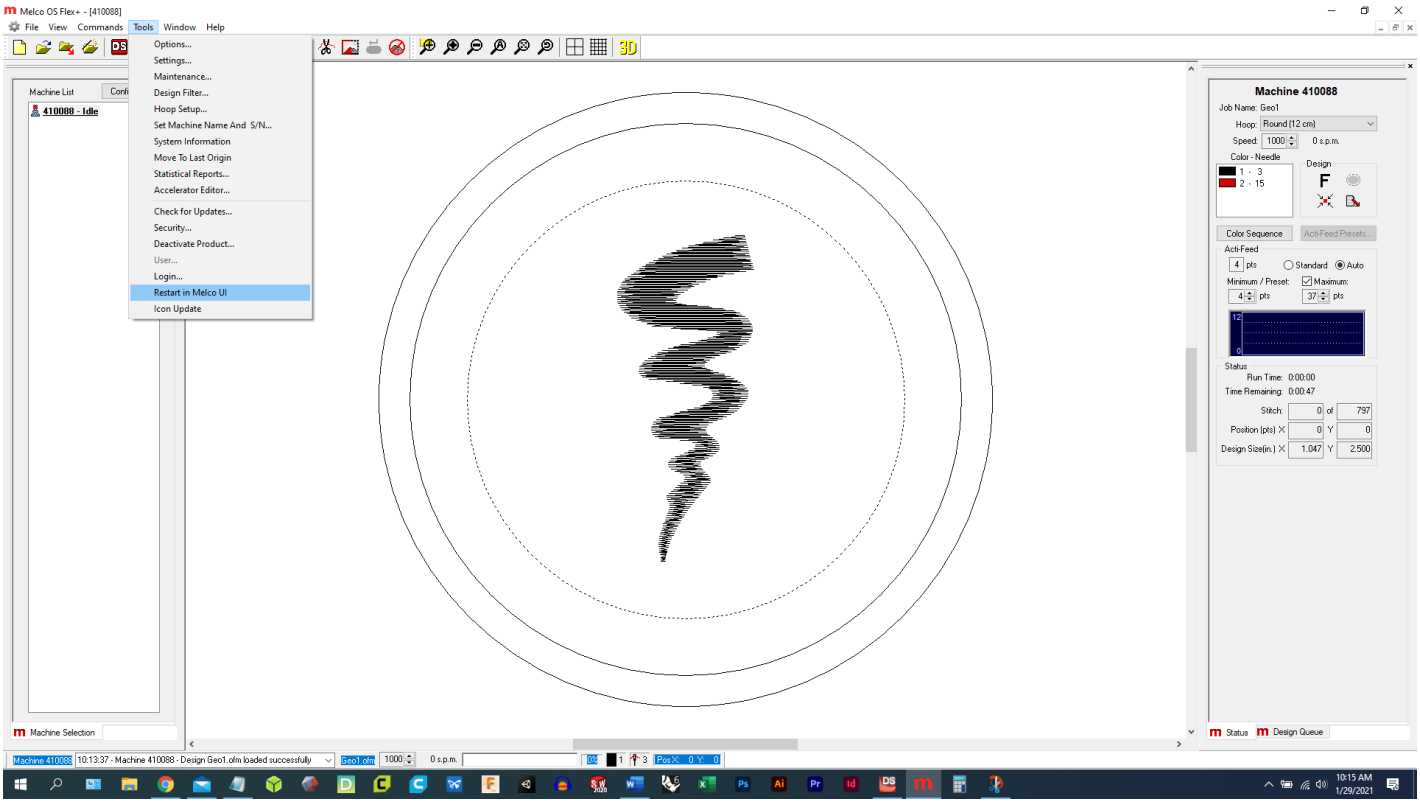
3. Turn on machine and wait for it to finish initializing





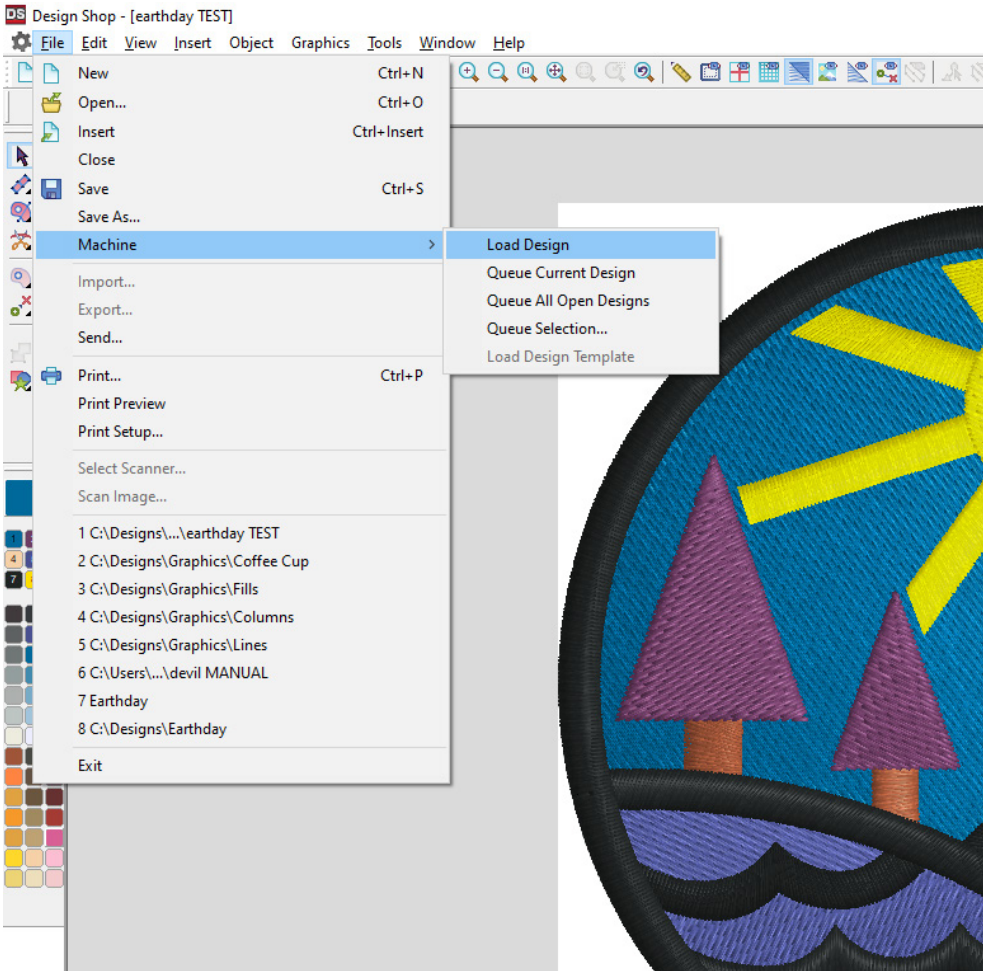
4. Disengage the E-Stop if necessary

5. Open Melco OS. (NOTE: the most recent design will appear when you open Melco OS)



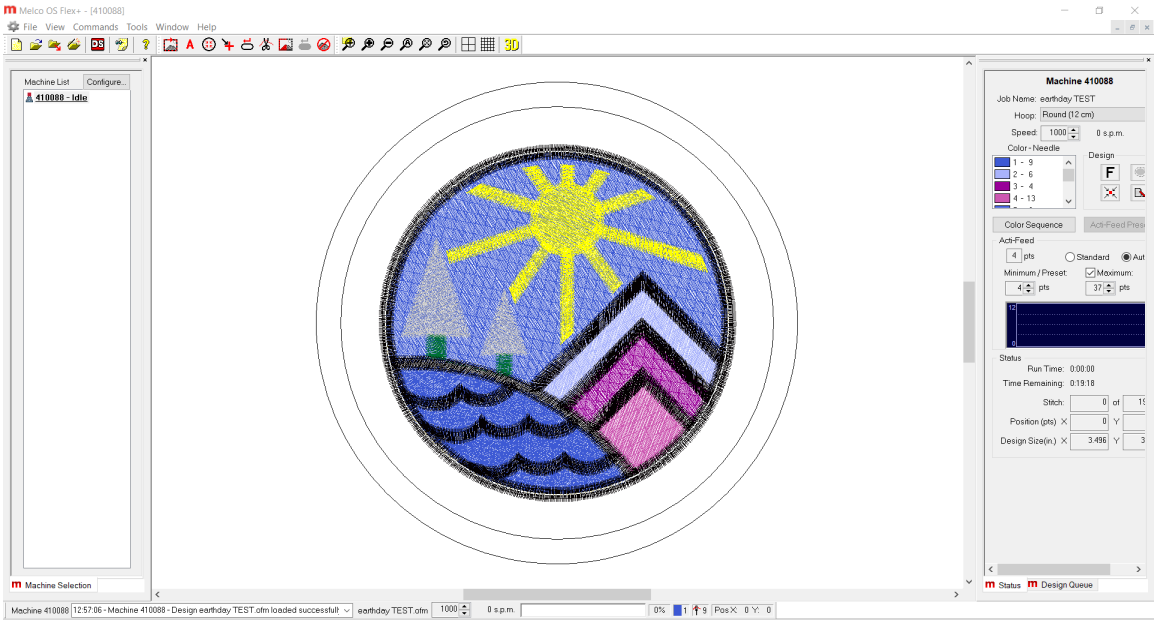
6. In Design Shop, send your job to Melco OS

(File > Machine > Load Design)



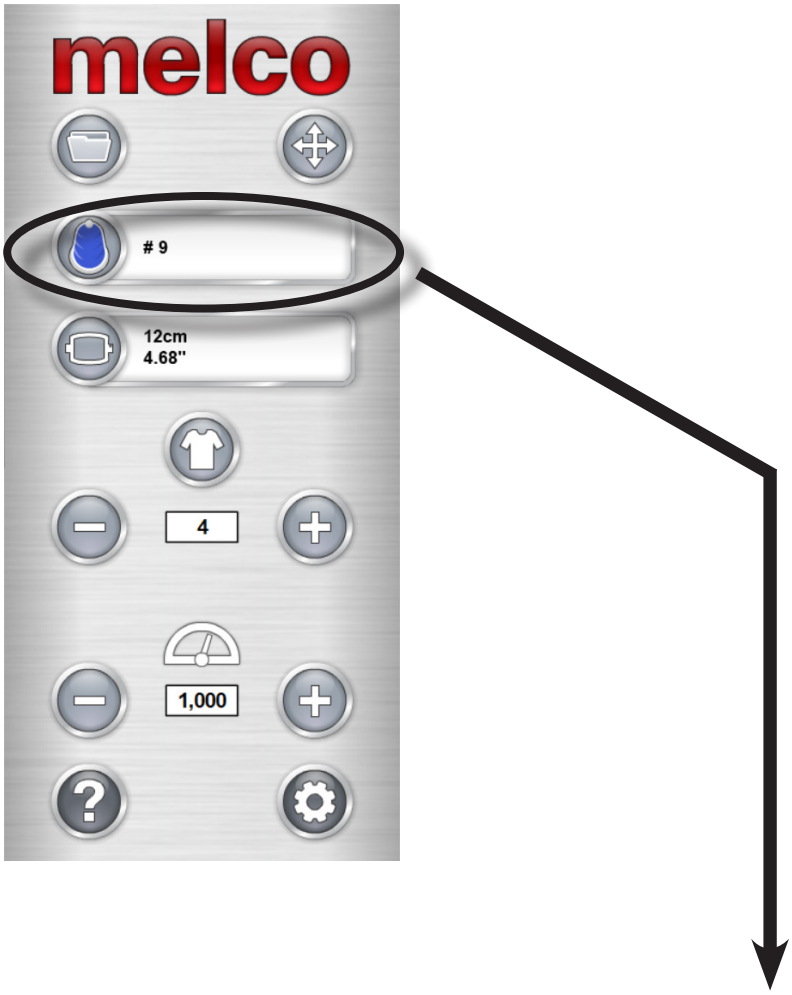
7. After a few moments, you should see your design appear in Melco OS. You can restart Melco OS in "Melco UI" if desired. (RECOMMENDED) (NOTE: There may be less features in Melco UI versus Melco OS)

(Tools > Restart in Melco UI)



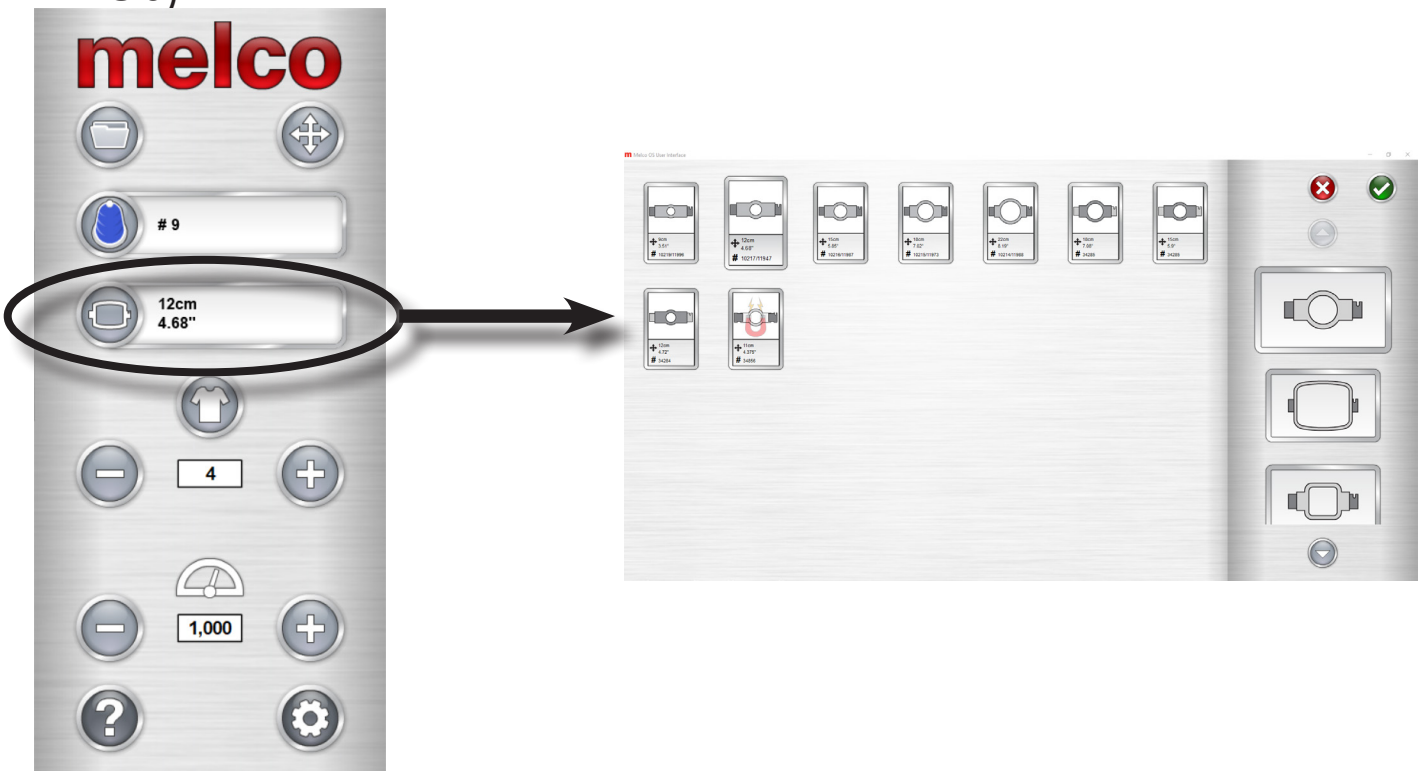
8. If there are maintenance prompts in Melco OS, ask one of the Shop staff to perform this before moving on. These maintenance tasks are essential and only take a few moments to perform

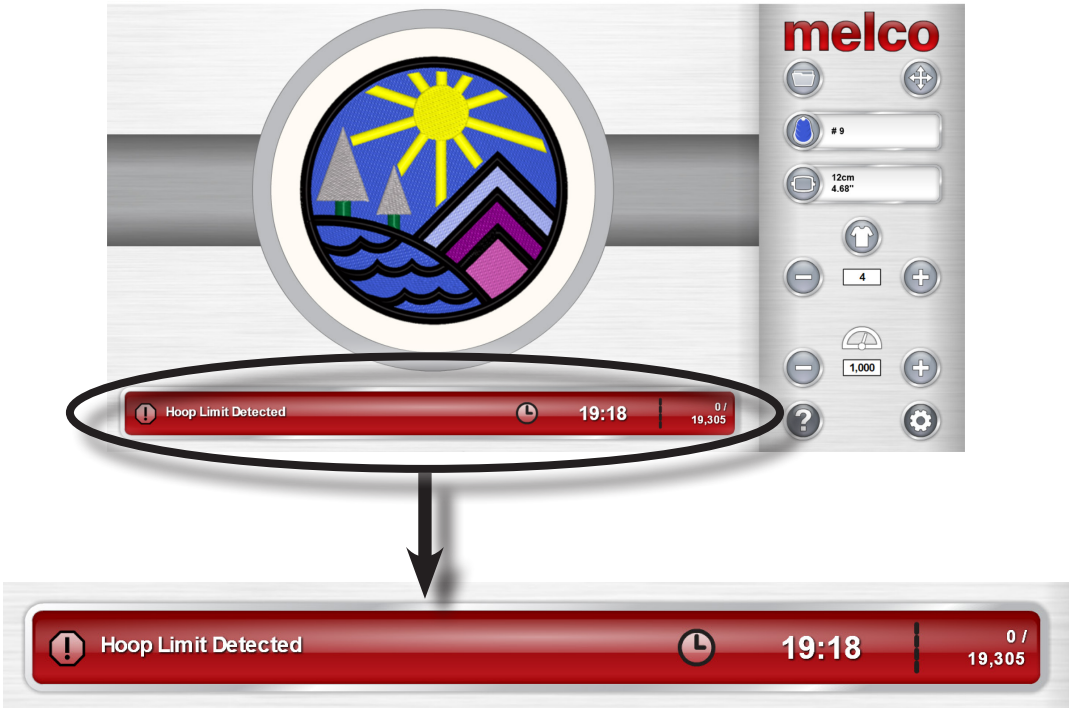
9. Assign your colors via “Color Sequence” via the right tool-bar



10. Assign your Hoop size via the right toolbar.

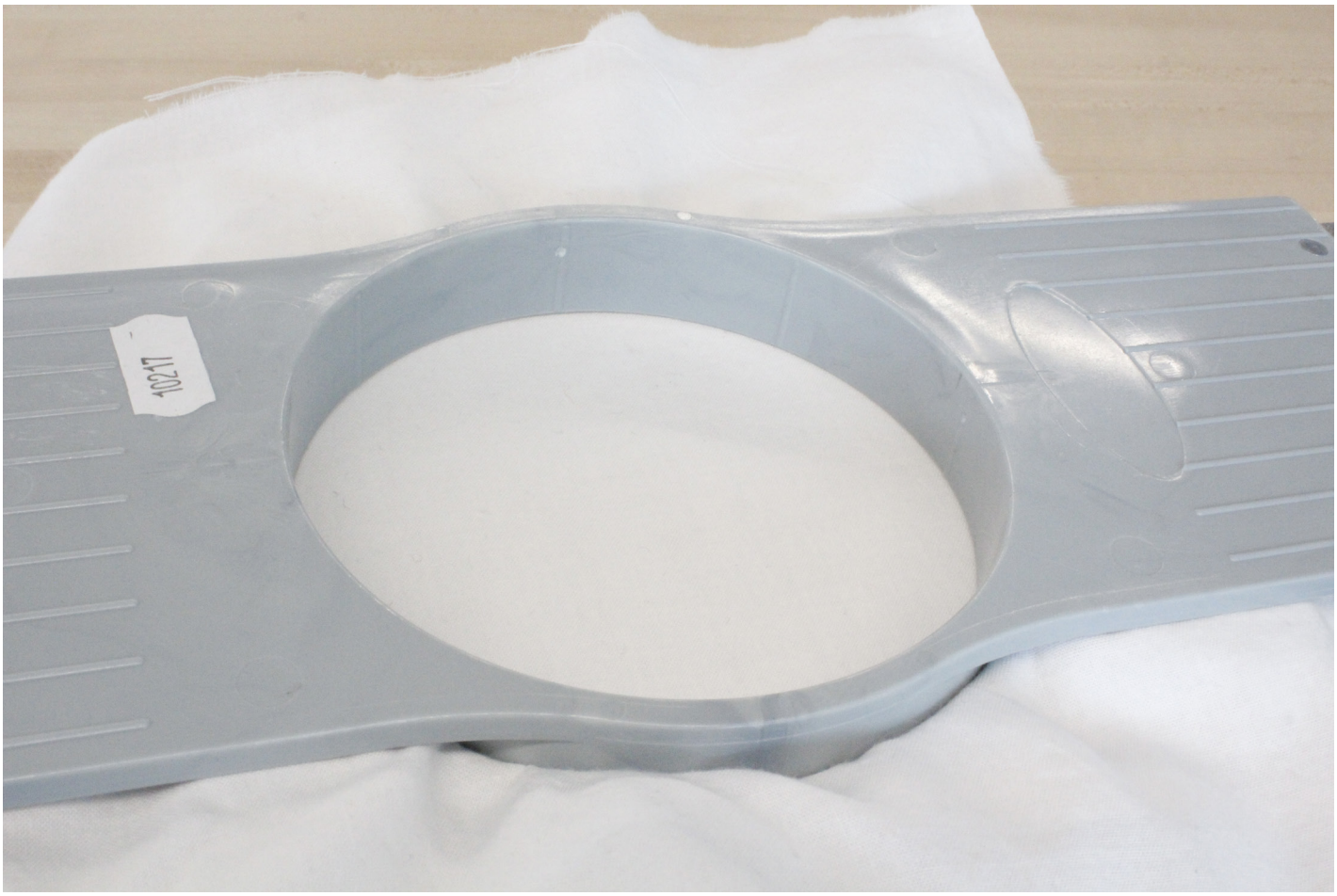
(NOTE: If the hoop you assign is too small, it will give you a warning. You can choose a larger hoop, OR, re-size the design in Design Shop and re-send the job to Melco OS)





11. Hoop your material and load the hoop into the machine.

(FOR MORE INFORMATION SEE SECTION: “HOOPING MATERIAL” ON PAGE 29)

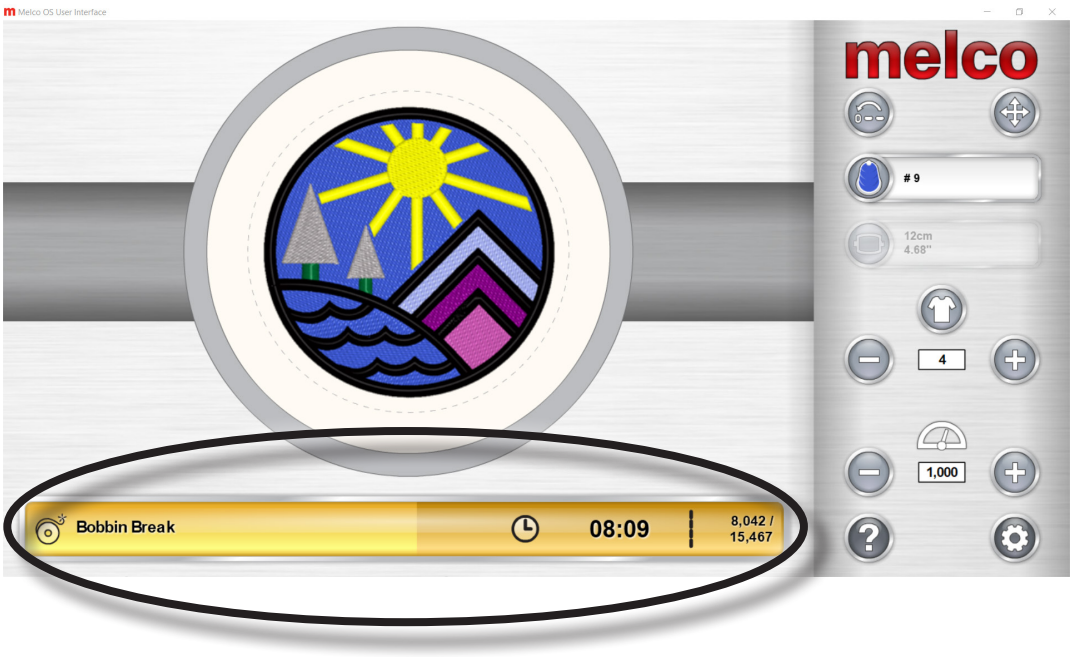


12. Assign your Material Thickness via the right toolbar. (4 is the default, but you may need to adjust this. Please ask one of the Shop staff to help you with this if you are not sure!)

13. Assign your Stitch Speed via the right toolbar. 1000-1200 is a good general stitch speed, but this may need adjusting as well. If you aren't sure, ask Shop staff to help!

14. When ready, press the green “Start” button on the machine control pendant

15. If there is a thread/bobbin break, the machine will stop. Ask one of the shop staff to assist you if this happens. After the issue has been corrected, use the Jog button on the controller pendant to return to the last successful stitch. (The laser pointer will help locate this)

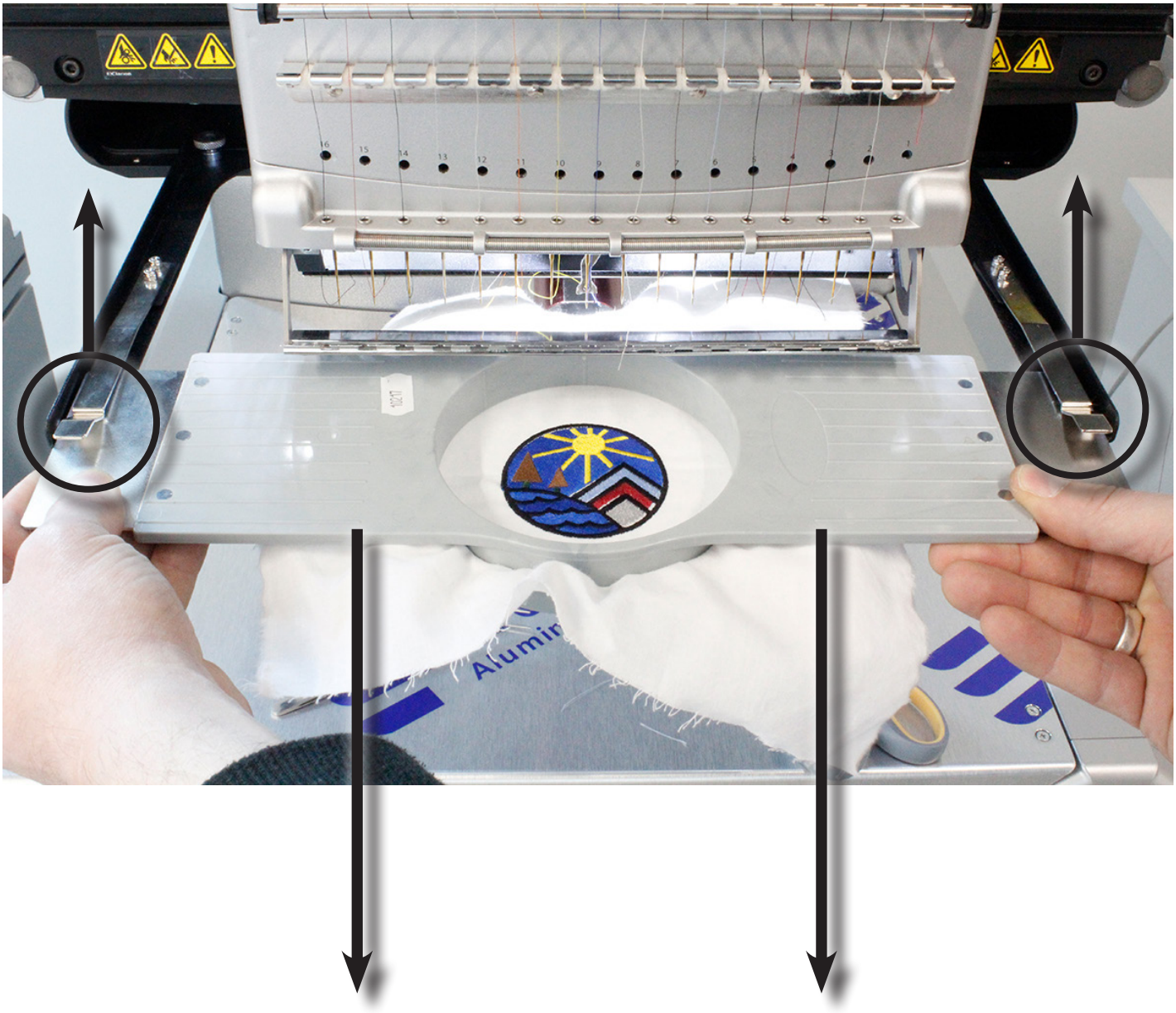


16. Press the green “Start” button to resume

17. To PAUSE the job, press the red “Stop” button and press the green “Start” button to un-pause.

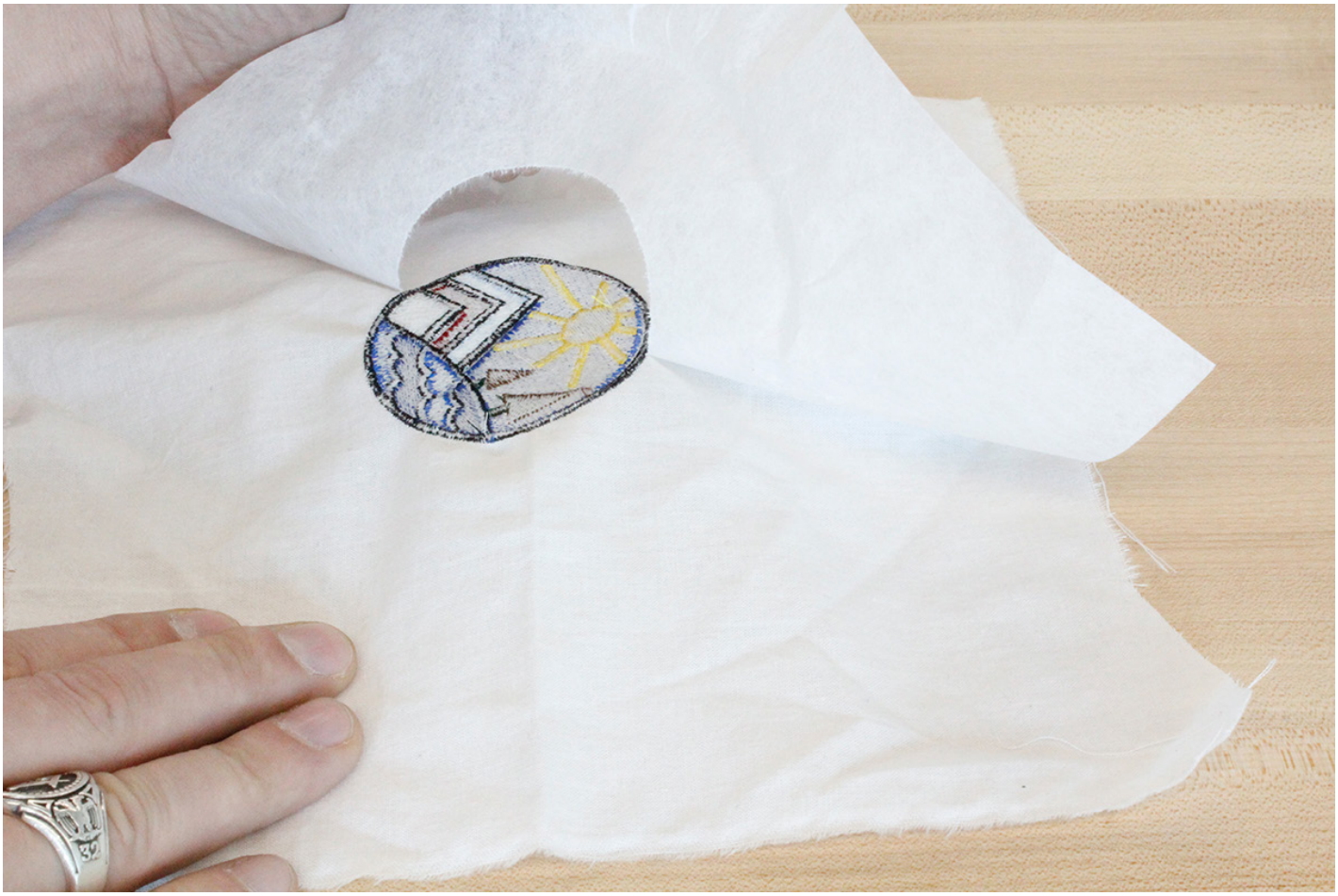
To completely CANCEL the job and restart from the beginning, press the Emergency Stop button on the controller pendant.

18. After your job is finished and the machine has come to a complete stop, remove the hoop by lifting the hoop arm bracket clips and pulling the hoop directly towards you.



19. Unscrew the hoop-ring and remove your material. Be sure to return the hoop-ring to the hoop

20. Remove the backing (tear off or cut away)



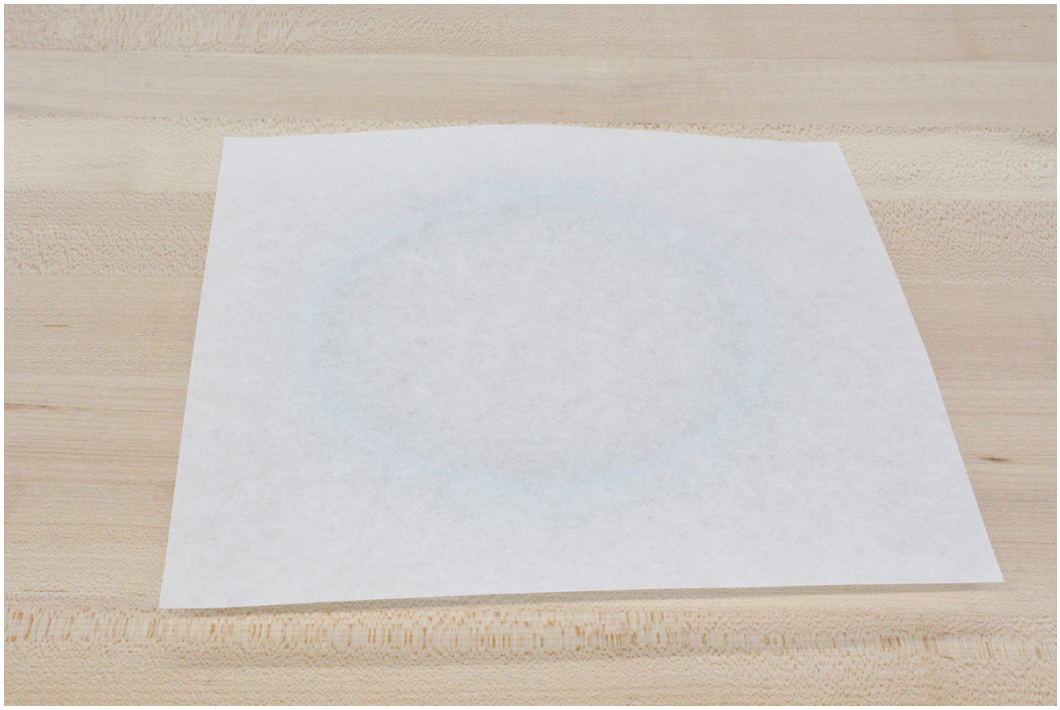
21. Return all tools, hoops, and items to where they belong and clean up any excess threads and waste.

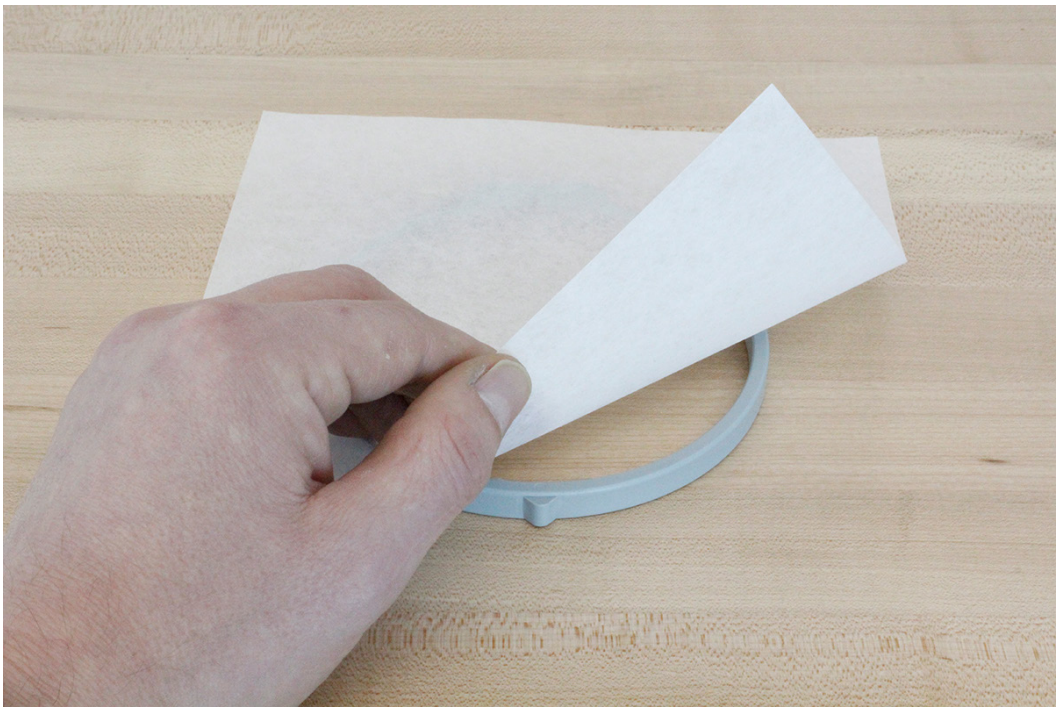
1. Start on a clean, flat surface. Do not hoop on an uneven surface or on a stack of fabric

2. Choose the correct hoop size for your design. Its best to use the smallest hoop possible

3. Place the hoop-ring on the table

4. Place your backing on the hoop-ring. Make sure your piece of backing is larger than the hoop!



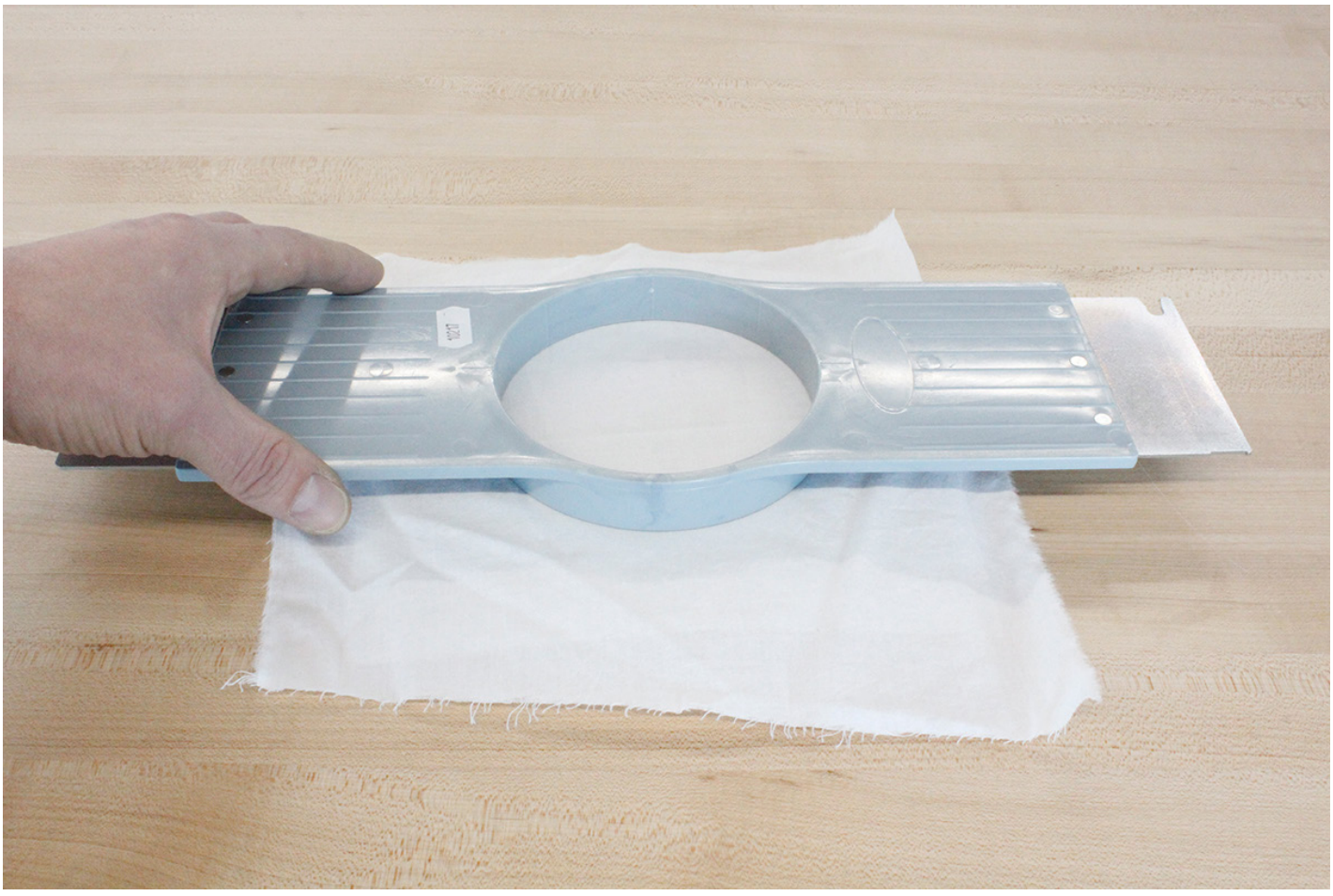


5. Place your fabric on the backing and hoop-ring and smooth it out. (It is best to iron your material prior to hooping for best results)

(NOTE: you should only embroider one layer of fabric at a time! Attempting to embroider 2 layers may result in failure of the design!)

6. Gently align the inner hoop (the larger piece with the brackets) over the fabric.

(NOTE: The mounting brackets should be face-up and the notch should be facing AWAY from you)



7. Using the mounting brackets as a guide, make sure the hoop is centered and level on the fabric correctly.

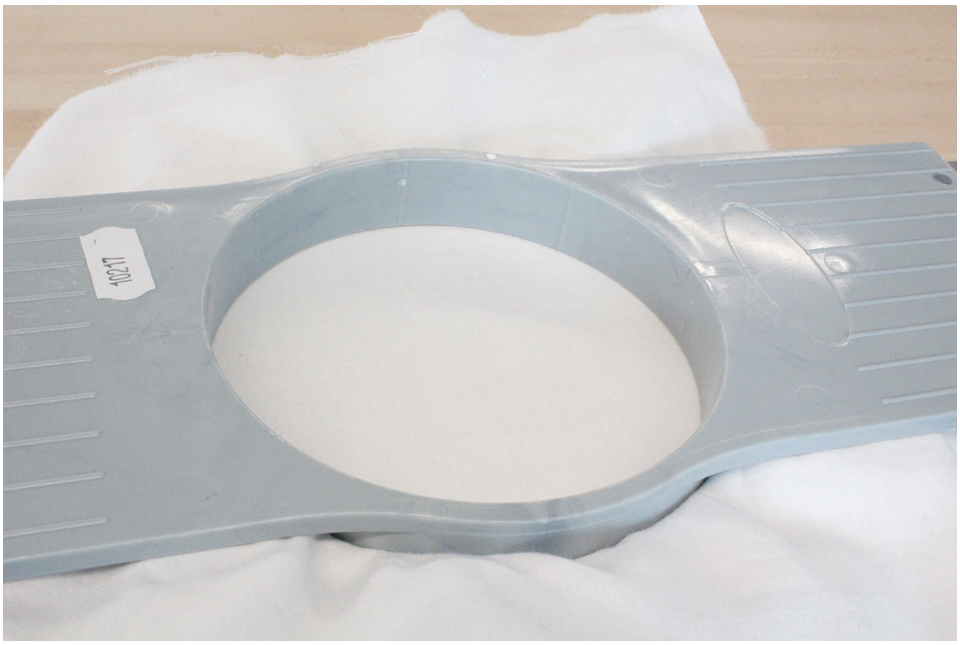
NOT LEVEL

LEVEL

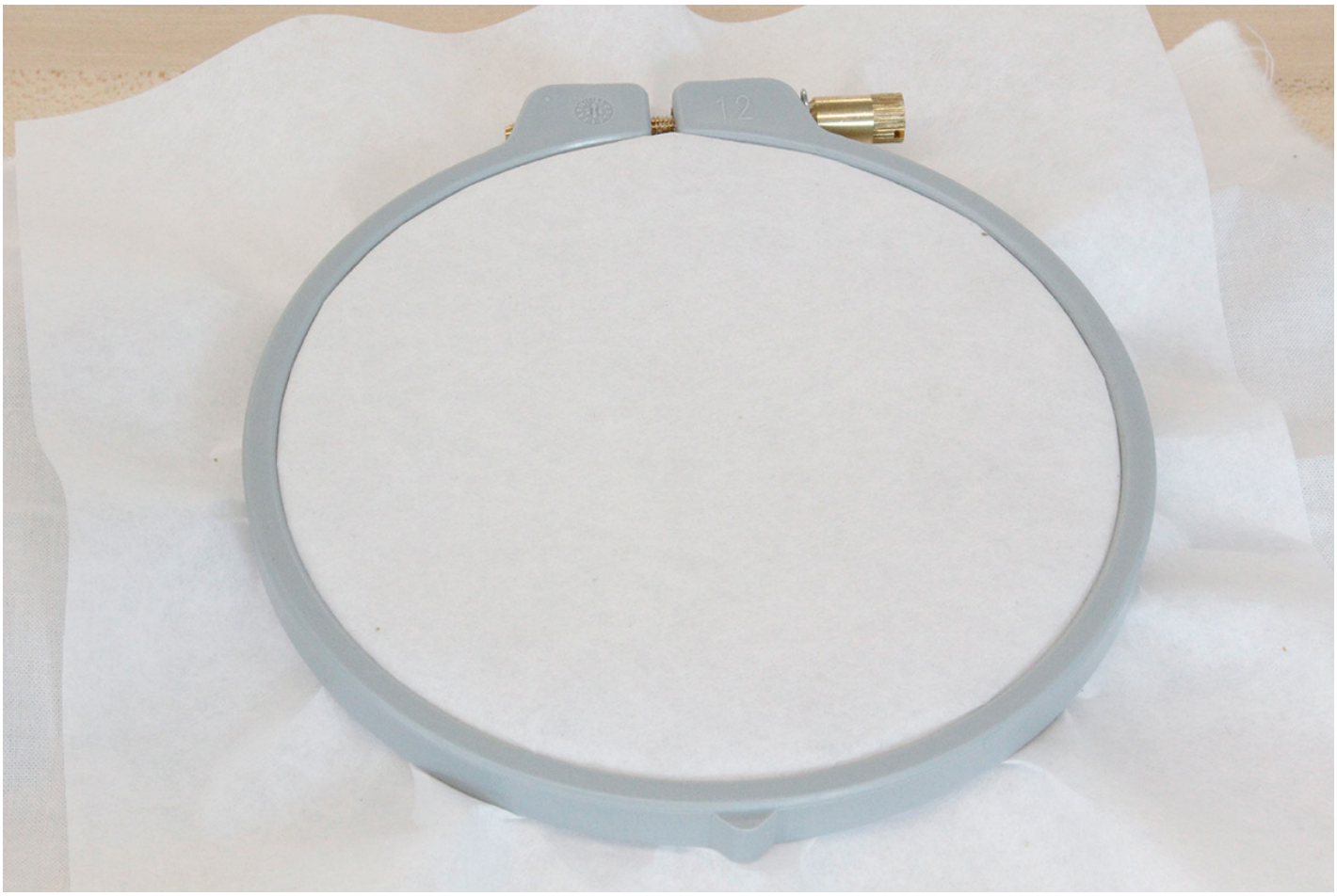
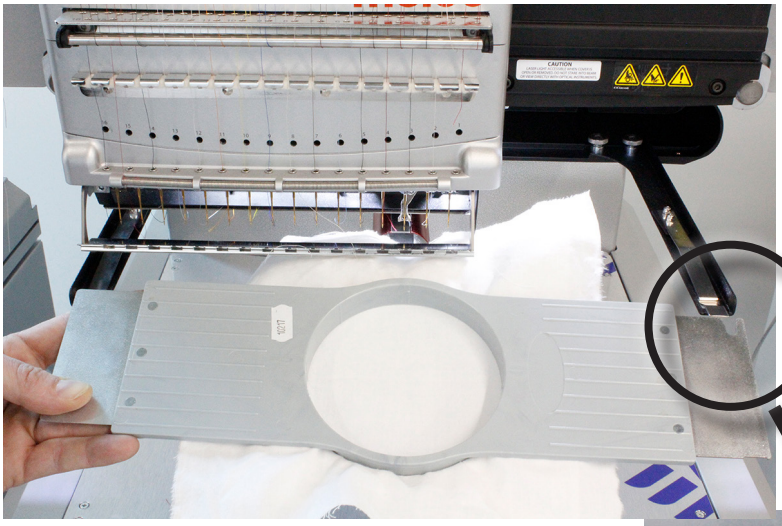
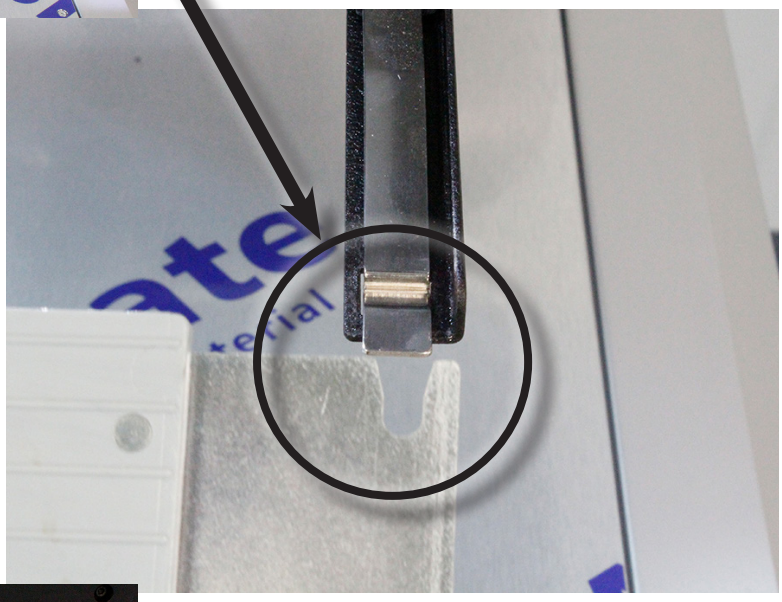
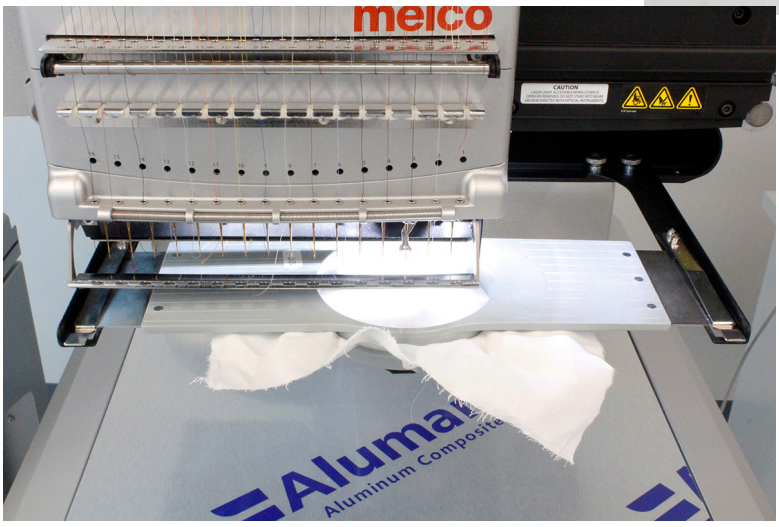
8. Press down on the ring part of the hoop firmly to seat it. Do NOT press down on the arms/brackets of the hoop as this may damage or break the hoop

9. Once the hoop is seated, tighten the tension screw on the hoop-ring

10. Pull the fabric tight and flat. It should sound like a small drum when you tap your finger on it. Failure to ensure the fabric is taught and flat will result in a failed job.



11. Check the back of the hoop to ensure there are no wrinkles or other parts of the fabric lodged in the hoop



12. Slide the hoop in the machine's hoop arm clips. Remember that the notch in the hoop's bracket should be on the right and facing away from you. You will hear a click when the hoop is properly seated in the machine.