



# Serger Guide

Janome Pro 4DX Serger



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# Before You Start

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## What does a serger do?

A serger (also called an **overlock machine**) is a specialized sewing machine that trims, encloses, and sews fabric edges all in one step. Unlike a standard sewing machine, which uses one or two threads, a serger uses **three or four threads** at once to create strong, stretchy, professional-looking seams.

The Janome Pro 4DX uses two needles and two **loopers** (an upper looper and a lower looper) instead of a bobbin. The loopers interlock threads around the fabric edge while a built-in **knife** trims the excess material as you sew. This produces the clean, finished edges you see on store-bought clothing.

The machine also features a differential feed system, which uses two sets of feed dogs to control how fabric moves through the machine. This helps prevent stretching on knit fabrics and can create gathered or ruffled effects.

## What can you make with a serger machine?

A serger is ideal for finishing and construction projects, including:

- **Garment Construction:** T-shirts, leggings, activewear, swimwear, and other knit garments where stretchy seams are needed.
- **Edge Finishing:** Clean, professional edges on fabric pieces to prevent fraying, even on items that will be sewn on a regular machine.
- **Home Textiles:** Napkins, towels, blankets, and curtains with neat rolled or overlocked hems.
- **Alterations and Repairs:** Re-finishing raw edges on altered garments, shortening sleeves, or repairing stretched-out seams.
- **Decorative Effects:** Rolled hems, lettuce edges on stretchy fabric, and exposed decorative serging with contrasting thread.

A serger does not replace a regular sewing machine. It works alongside one, handling edge finishing and stretch seams while your sewing machine handles tasks like zippers, buttonholes, and topstitching.

## What to Expect

- **Average project time:** 30–90 minutes (depending on the project and experience level).
- **Skill level:** Intermediate. Sewing experience is recommended before using a serger.
- **Threading:** Threading a serger is more complex than a regular sewing machine. The machine uses four thread paths and must be threaded in a specific order. Staff can assist with initial setup.

If you are new to serging, consider starting with a simple edge-finishing project on scrap fabric to get comfortable with the machine before working on your project.

## Hardware Overview

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The Janome Pro 4DX is a mechanical serger. All settings are controlled directly on the machine using dials and levers. No software or digital files are required.

## Key Components

1. **Thread tension dials (4):** Control the tension for each of the four threads: left needle, right needle, upper looper, and lower looper. Each dial is numbered and adjustable.
2. **Stitch length dial:** Controls the distance between stitches. A setting of 3 is standard for most projects.
3. **Differential feed dial:** Controls how the front and rear feed dogs work together. Set to 1.0 for normal sewing. Increase above 1.0 to gather fabric or prevent stretching; decrease below 1.0 for a stretched or lettuce-edge effect.
4. **Upper and lower loopers:** Located behind the looper cover on the front of the machine. These carry the looper threads that wrap around the fabric edge to form the overlock stitch.
5. **Cutting knife (upper and lower):** Automatically trims the fabric edge as you sew. The upper knife can be disengaged using the knife knob if you do not want to trim.
6. **Presser foot and presser foot lifter:** The presser foot holds the fabric in place. Lift it using the lever at the back of the machine to insert or remove fabric.
7. **Balance wheel (handwheel):** Located on the right side. Always turn it toward you to manually move the needle.
8. **Foot pedal:** Controls the sewing speed. Press gently for slow sewing, press harder to go faster.
9. **Spool stands:** Located at the back of the machine. Holds four spools of thread, one for each thread path.

10. **Needle plate setting knob:** Switches between standard overlocking (S) and rolled hem (R) modes by adjusting the position of the chaining finger.

The machine also includes a built-in thread cutter, a looper cover that opens for easy access to the looper area, and colour-coded thread guides to help with threading.

## Supplies & Material

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**You must bring your own fabric.** The Makerspace does not sell or provide fabric for sewing projects.

## What the Makerspace Provides

- Serger thread (basic colours)
- Serger needles
- Basic tools (tweezers, small screwdriver, lint brush)

## What You Should Bring

- Your fabric, pre-washed and ironed if possible.
- Any specialty thread your project requires (e.g., woolly nylon for rolled hems, decorative thread).
- Your sewing pattern or project plan.

## Thread

The serger uses four cones or spools of thread. For most projects, standard **polyester serger thread** works well. Serger thread is thinner and smoother than regular sewing thread, which helps it feed through the loopers without jamming.

**Tip:** All four threads do not need to match your fabric colour exactly. Many projects use a matching colour on the needles (visible on top) and a neutral colour on the loopers (hidden inside the seam).

# Safety

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The serger is safe when used with care, but it has some additional hazards compared to a standard sewing machine.

## Cutting Blade Risk

The serger has a built-in **upper and lower knife** that trims fabric as it sews. The blade moves rapidly during operation.

- Keep your fingers well away from the cutting area at all times while sewing.
- Never attempt to adjust or touch the knife while the machine is running.
- **Always turn off the machine** before changing needles, threading, or making any adjustments.

## Needle and Loper Risk

- The serger uses two needles and two loopers, all of which move rapidly. Keep fingers clear of the needle and looper area.
- The loopers are located behind the front looper cover. Do not open this cover while the machine is running.

## Pin Risk

- Never sew over pins with a serger, as they can destroy the cutting blade, damage the needles, and throw the machine out of timing and in rare cases launch broken pins towards your face.
- Pins should be placed parallel to the raw edge, far from the blade path, and removed well before reaching the presser foot.

## Thread Cuts

Thread under tension can cause small cuts like a papercut. Handle thread carefully when threading or re-threading the machine.

## General Rules

- Keep the looper cover closed while sewing.
- Do not pull/force fabric through the machine. Let the feed dogs move the fabric.
- Ask staff for help with threading, needle changes, or any adjustments you are unsure about. If something sounds or looks wrong during use, stop immediately and ask staff.



# Getting Started

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This section walks you through using the serger from setup to sewing. Threading a serger is more involved than a standard sewing machine, so don't hesitate to ask staff for help.

## 1. Set Up the Machine

1. Place the serger on a sturdy table with room for fabric to feed through.
2. Plug in the power cord and foot pedal.
3. Turn the power switch to ON.
4. Raise the spool stands at the back of the machine and place four cones of thread onto the spool pins.

## 2. Thread the Machine

The serger must be threaded in a specific order: **upper looper** → **lower looper** → **right needle** → **left needle**. Threading out of order can cause jams or missed stitches.

Each thread path is colour-coded on the machine. Follow the printed guides on the machine body, matching each thread to its corresponding colour path.

**Tip:** The machine includes a threading chart on the inside of the looper cover. Use it as a reference while threading.

For each thread:

1. Guide the thread from the spool through the tension dial for that thread.
2. Follow the colour-coded path through the thread guides.
3. For the loopers: thread through the looper eye (open the looper cover to access).
4. For the needles: thread through the needle eye from front to back.

Staff can assist with threading, especially if this is your first time using a serger.

## 3. Choose Your Settings

**Number of threads:** This serger can operate with 3 or 4 threads. For a standard overlocked edge, use all 4 threads.

**Stitch length:** Set the stitch length dial. A setting of 3 is standard for most fabrics. Use a shorter stitch length for lightweight fabrics and a longer one for heavier materials.

**Differential feed:** Set the differential feed dial to 1.0 for most sewing. If sewing stretchy knits, increase to 1.5–2.0 to prevent the fabric from stretching or waving. Decrease below 1.0 for a lettuce-edge effect on stretchy fabric.

**Thread tension:** For most projects, set all four tension dials to 3–4 as a starting point. Adjust as needed based on test results. Staff can help with tension adjustments.

## 4. Test on Scrap Fabric

Before starting your project, always run a test on a scrap piece of the same fabric:

1. Place the scrap fabric under the presser foot and lower the foot.
2. Gently press the foot pedal to begin sewing.
3. Check the stitch quality on both sides of the fabric.
4. Adjust tension, stitch length, or differential feed as needed.

A balanced stitch will have the needle threads lying flat on top of the fabric and the looper threads meeting neatly at the edge.

## 5. Start Your Project

1. Place your fabric under the presser foot with the edge aligned to the cutting knife.
2. Lower the presser foot.
3. Press the foot pedal gently to begin sewing. The knife will trim the edge as the machine stitches.
4. Guide the fabric gently. Do not push or pull—let the feed dogs do the work.
5. When you reach the end, sew a few centimetres past the fabric edge to create a thread chain.
6. Raise the presser foot and gently pull the fabric away from the machine.

## 6. Switching to Rolled Hem (Optional)

The serger can produce a narrow-rolled hem, often used on lightweight fabrics for scarves, napkins, and ruffles:

1. Remove the left needle (you'll use 3 threads for a rolled hem).
2. Turn the needle plate setting knob from S (standard) to R (rolled hem).
3. Shorten the stitch length to 1–2 for a tighter rolled effect.
4. Increase the lower looper tension and decrease the upper looper tension (staff can help with specific settings).
5. Test on scrap fabric before starting your project.



## Tips for Success

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- **Always test on scrap fabric first.** Every fabric behaves differently. A quick test lets you check stitch quality, tension, and differential feed before committing to your project.
- **Thread in the correct order.** Always thread: upper looper → lower looper → right needle → left needle. Threading out of order is the most common cause of problems.
- **Use the differential feed for knits.** If your knit fabric is stretching or creating wavy edges, increase the differential feed dial above 1.0. This is one of the serger's most useful features.
- **Don't sew over pins.** The serger knife will hit pins and can damage the blade or break a needle. Remove all pins before they reach the presser foot.
- **Guide, don't pull.** Let the feed dogs move the fabric through the machine. Pulling can cause uneven stitches, skipped loops, or fabric distortion.
- **Keep the machine clean.** Sergers produce more lint than regular sewing machines. Use the lint brush to clean the looper area and feed dogs regularly, especially when switching between fabrics.
- **Secure your thread chains.** The thread chain at the end of a seam can unravel if left loose. Weave it back into the seam with a tapestry needle or apply a small dot of seam sealant.
- **Save your scraps.** Keep a few pieces of your project fabric nearby for re-testing if you need to adjust settings mid-project.

## Common Issues & Quick Fixes

| Problem                          | What to Do                                                                                                                                                                       |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Thread keeps breaking            | Check that the thread is seated correctly in its tension dial and following the full thread path. Re-thread the affected thread. Also check for lint buildup in the thread path. |
| Skipped stitches                 | The machine may need re-threading. Check that the needles are inserted correctly (flat side facing back) and are the right size for your fabric. Try a fresh needle.             |
| Fabric is stretching or waving   | Increase the differential feed dial above 1.0. For very stretchy knits, try a setting of 1.5 to 2.0.                                                                             |
| Fabric is puckering or gathering | The differential feed may be too high. Lower it toward 1.0 or slightly below. Also check that the thread tension is not too tight.                                               |
| Looper threads are not catching  | Re-thread the loopers in the correct order (upper looper first, then lower looper). Make sure the thread is fully seated in the looper eye.                                      |
| Uneven or loose stitches         | Check all four tension dials. A balanced stitch has the looper threads meeting at the fabric edge. Adjust the looper tensions up or down in small increments.                    |
| Knife is not cutting cleanly     | The upper or lower knife may be dull. Ask staff for assistance — knife replacement is a staff-only task.                                                                         |
| Machine is jamming               | Turn off the machine. Carefully remove the fabric and clear any tangled thread from the looper area. re-thread all four threads in the correct order and try again.              |

If the issue persists after trying these steps, ask staff for help. Some problems may require re-threading from scratch or a machine adjustment.

## Need More Help?

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If you need additional support:

- Ask Makerspace staff for assistance at All Levels Access hours.
- Refer to the Janome SUV1108 owner's manual for detailed machine specifications and advanced settings.