

Potential Hazards

When using the machine be careful with:

- Moving parts
- Needles and in particular broken needles

Instruction Manual

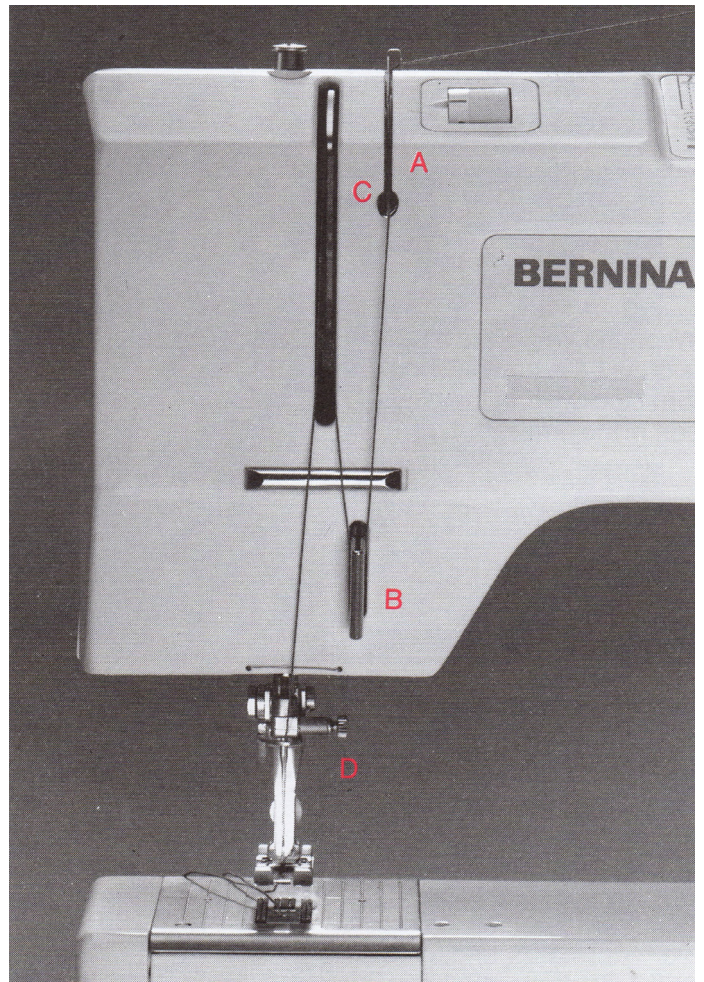
- Each machine has an instruction manual in its cover explaining all the processes we are going to look at today. Remember to have a look at it if you have any doubts.

Setting up the Machine

- Plug the mains/foot pedal into the machine and into the mains socket.
- You can turn the machine 'on' and 'on with the light' but keep it off while setting it up.

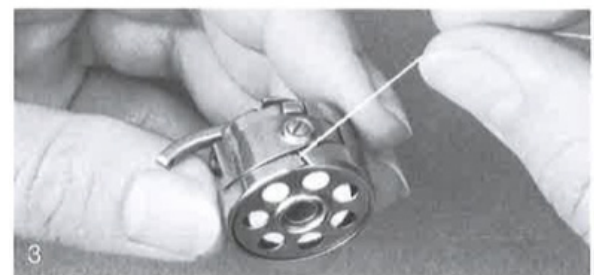
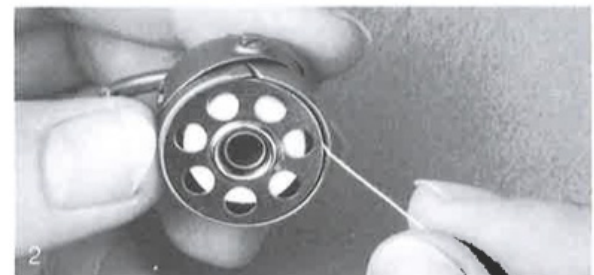
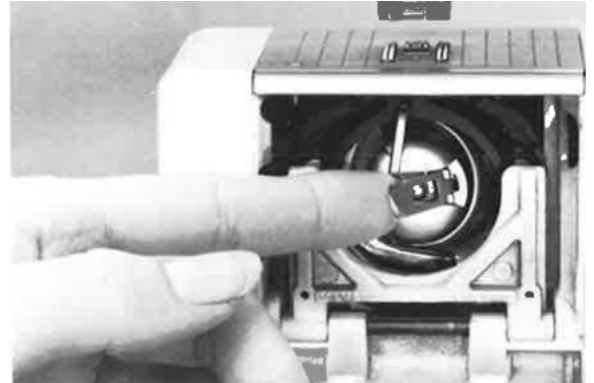
Thread your sewing machines:

- Always thread from right to left starting with the spool of thread and ending with threading the needle.



Setup the bobbin

- Check that the needle is raised, open the hinged front cover, pull the bobbin case latch forward and remove the bobbin case
- Hold the bobbin case in one hand and insert the new bobbin with thread running in a clockwise direction (see the arrow)
- Take the thread anticlockwise to the slot
- Pull the thread into the slot and under the spring, until it lies in the T-shaped slot at the end of the spring
- When the end of the thread is pulled, the bobbin should turn clockwise, in the direction of the arrow
- Insert the bobbin case into the hook by holding it by the latch with the finger of the bobbin case pointing upwards, engaging the notch of the hook race cover.
- Pull the end of the thread by 15cm



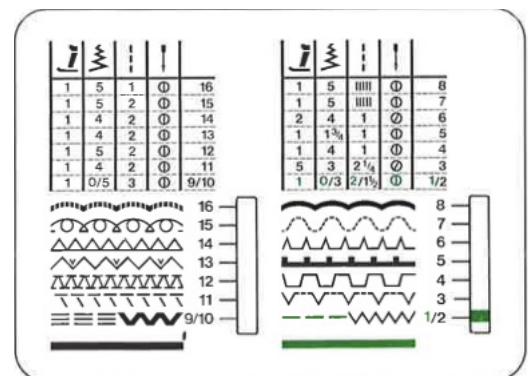
Bring up the lower thread

- Hold the upper thread loosely and turn the hand-wheel towards you until the thread take-up lever is fully raised. Pull the upper thread so that the lower thread is brought up as seen in the picture.



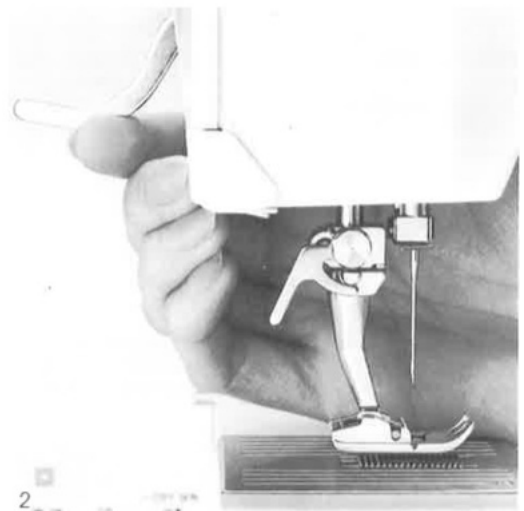
Setup your straight stitch

- Choose stitch number 1/2
- Presser Foot: No 1
- Thread: according to fabric
- Needle according to fabric
- Stitch width: 0
- Stitch length: 1 - 5 according to fabric
- Needle position: centre
- Feed-dog: sewing
- Colour indicator: Green



Start sewing

- Raise the needle turning the hand-wheel
- Raise the presser foot by using the presser foot lever on the back of the machine
- Place your fabric
- Lower the presser foot
- Try to sew a straight line following the guiding lines on the stitch plate
- Use the pedal to activate the machine and regulate the sewing speed by varying the pressure on the plate of the foot control unit.

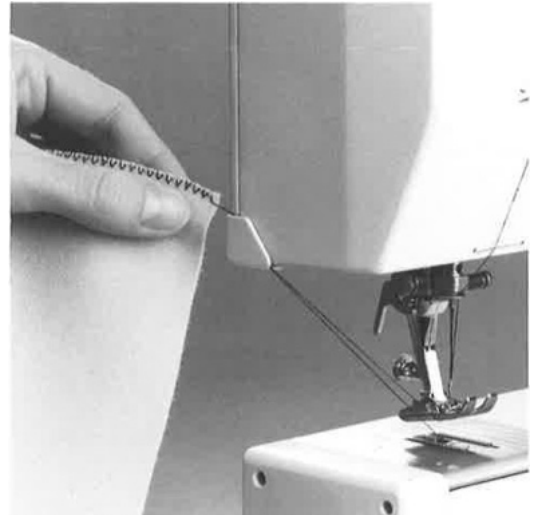


- At the beginning and end of a seam, sew in reverse for approximately 1cm and then forward again to secure the ends.
- To remove your work, raise the presser foot and check that the needle is raised. If not turn the hand-wheel. Take the work out to the rear left and hook both threads into the cutter.



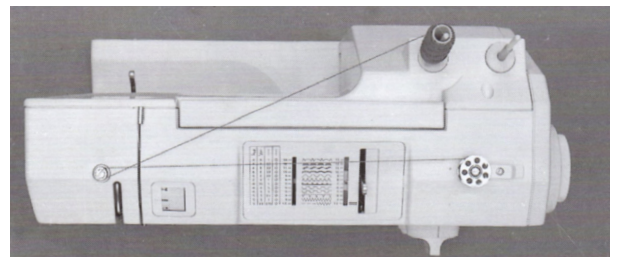
Practical exercises:

- Stitch second line with a different stitch length and third line with a wider stitch (zigzag).
- Trace an L-shape and a curve on your fabric with tailor's chalk, then try to sew precisely onto the chalk marks. At the corner of the L-shape, keep your needle low inside the fabric when raising the presser foot and turning the fabric.
- Iron a seam and use pins perpendicular to the seam to hold layers of fabric in place whilst stitching. This keeps both pieces feeding through at the same rate to avoid bunching and uneven seams.



Bobbin winding and use

- Empty bobbins can be wound with your chosen thread using the bobbin winding attachment. Please use the bobbin box to store, don't let them loose in the supplies box and keep threads neat.
- See diagram on how to thread the bobbin winder. Place the empty bobbin on the spindle and press it to the right against the bobbin winder stop.
- Holding the hand-wheel with the left hand, turn the hand wheel release forward with the right hand to stop the needle from going up and down when winding the bobbin.
- Press on the foot control to start the motor.



- When the bobbin is full, push the bobbin to the left to remove it
- Bobbins should be wound evenly to avoid tension problems when sewing.

Cleaning and Housekeeping









- Turn off machine and brush off any lint or debris from the outside and the bobbin area of the machine. Replace the machine cover and ensure the manual is in its pocket in the cover.
- Disconnect the foot pedal and neatly wind up the leads and place in the machine cover.
- If you notice that any tools or accessories are damaged or worn, or that we are running out of supplies like needles, thread, chalk, etc, please alert a technician. Damaged tools or parts can cause injury to other users.
- Make sure the sewing supplies box and drawer are neat and that everything is put back in its place. Do not leave scraps or fabric in the supplies boxes, and generally leave everything the way you would like to find it.

EXTRA INFORMATION

More practical stitches








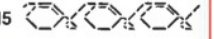

Range of applications

Green practical stitches

<p>1 Straight stitch</p>  <p>Alle types of non-stretch fabric. All straight stitch work.</p>	<p>2 Zig-zag</p>  <p>For most types of fabric. All simple zig-zag work, e.g. over-sewing, especially on fine fabrics. Sewing elastic and lace.</p>	<p>3 Blind stitch</p>  <p>For most types of fabric. Blind hemming, shell edging on soft jersey and fine fabrics, decorative work.</p>	<p>4 Universal stitch</p>  <p>For firmer knitted fabrics, felt, leather etc. Flat joining seams, visible hems, patchwork, mending interlock fabrics, sewing on elastic, decorative seams.</p>
<p>5 Stretch stitch</p>  <p>For very stretchy fabrics. Very stretchy open seams for ski, riding, climbing and hiking wear.</p>	<p>6 Vari-overlock</p>  <p>Primarily for fine synthetic and silk jersey, Helanca, fine cotton and wool jerseys. Stretchy overlock seams and hems, particularly suitable for sports underwear, T-shirts, sweatshirts, etc.</p>	<p>7 Running stitch</p>  <p>For most types of fabric. Darning with running stitch, mending of woven fabric, reinforcing edges, etc.</p>	<p>8 Scallop stitch</p>  <p>Primarily for woven fabrics. Edging of tablecloths, place mats, collars, cuffs, etc.</p>

Range of applications

**Red practical stitches
Red decorative stitches**

<p>9 Triple straight stitch</p>  <p>For corduroy, denim, overall and deck-chair fabrics, carpet borders, rucksacks, sleeping bags and similar. Hard-wearing seam for joining pieces of fabric or top stitching seams.</p>	<p>10 Triple zig-zag</p>  <p>For denims, corduroys, leathers, decorative hems, light fabrics for blinds and similar. Visible hems and seams, sewing on tape, extra strong seam for sportswear, woollen blankets, sleeping bags, rucksacks.</p>	<p>11 Towelling stitch</p>  <p>Primarily for towelling fabrics, denim, leather and other firm fabrics. Flat joining seams, visible hems for beachwear, craft work.</p>	<p>12 Double overlock</p>  <p>For all types of knitted fabrics and hand and machine knitted articles. Overlock seam.</p>
<p>13 Edge stitch</p>  <p>For most types of fabric. Visible hems, sewing on lace and tapes of all kinds, decorative edges, craft work.</p>	<p>14 Reinforced overlock stitch</p>  <p>For sweatshirt fabric, towelling, medium-weight knits. Reinforced overlock seams, craft work.</p>	<p>15/16 Decorative stitches</p>  <p>15 </p> <p>16 </p>	

Needle and thread choice

- Needles and threads should be chosen in relation to the thickness and type of fabric (see table).
- To change a needle, make sure the needle is in the fully raised position and switch the power off. Use the small screwdriver to loosen the needle clamp. Insert a new needle with the flat side towards the back of the machine and gently tighten with the screwdriver until secure.

Presser foot and feed dogs

- The presser foot holds the fabric against the feed dog, which moves the fabric through the machine whilst stitching.
- Presser feet can be changed to achieve different stitches or to hold the fabric in special ways such as for sewing zippers.
- When using stitches that move the needle side to side be sure your presser foot has a hole wide enough to accommodate the full range of the needle movement. Using the wrong presser foot can result in broken or bent needles.
- For very thick fabrics, such as denim, the pressure of the presser foot can be adjusted to allow layers to be fed through.
- Feed dogs can be disengaged using the knob at the bottom of the control panel. This is for uses such as embroidery or darning.

Standard needles	
130/705 H Normal point, slightly rounded	All-purpose needle for woven synthetic and natural fibres, fine linen, chiffon, batiste, organdie, wool, velvet, decorative seams and embroidery.
Special needles	
130/705 SES Fine ball point	Fine knits, also specially suitable for synthetics.
130/705 H-SUK Medium ball point	Heavier synthetic or natural fibre knits.
130/705 H-Stretch Medium ball-point	Special needle for delicate or difficult stretch fabrics.
130/705 H-J Extra fine point	Twill, workwear, heavy linen, denim, canvas. Penetrates dense fabrics more easily.
130/705 H-LL or H-LR Cutting point	Leather, suede, calfskin, kid, pigskin, imitation leathers and suedes, plastics, waxed fabrics.

	1 	2
Presser foot shaft for snap-on soles	Reverse pattern sole Red and green practical stitches Embroidery stitches	Overlock sole Vari-overlock seam Vari-overlock hem Oversewing seam edges
3 	4 	5
Buttonhole sole Buttonholes	Zip sole Sewing in zips Sewing close along raised seam	Blind stitch sole Blind hemming Edge stitching

Tension

- One of the main advantages of BERNINA machines is that there is very rarely a need to alter the thread tension for normal sewing.
- Correct tension of the top thread ensures the bottom thread is drawn up into the fabric creating a secure stitch (see diagram image 5 - image 6: incorrect tension)
- For special sewing, tension can be adjusted using the tension knob with the line between 4 and 6 being the most commonly used for neutral tension.
- It is recommended that you adjust the tension slowly, testing the stitches at each increment until you find the right tension for your fabric and operation.



▼ 5 ▲ 4



▼ 6



Troubleshooting

- Most problems can be solved by removing all the threads and bobbin and re-threading the top and bottom threads.
- Make sure there isn't any lint, thread or debris stuck in the bobbin casing or feed dogs.
- Make sure the tension is set correctly for your fabric and stitching operation.
- Make sure the bobbin is running freely and not knotted or tangled.
- Make sure the bobbin case is engaged fully in the hook.
- Please see a technician who can help you if you have any problems.