IMPORTANT SAFETY INSTRUCTIONS

Your sewing machine is designed and constructed only for HOUSEHOLD use. Read all instructions before using this sewing machine.

DANGER—To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in. Always unplug this appliance from the electric outlet immediately after using and before cleaning.
2. Always unplug before relamping. Replace bulb with same type rated 13.2 V d.c., 3 Watts.
3. Do not reach for the appliance that has fallen into water. Unplug immediately.
4. Do not place or store appliance where it can fall or be pulled into a tub or sink. Do not place in or drop into water or other liquid.

WARNING—To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Do not allow to be used as a toy. Close attention is necessary when this appliance is used by or near children.
2. Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
3. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air opening blocked. Keep ventilation openings of the sewing machine and foot controller free from accumulation of lint, dust, and loose cloth.
5. Never drop or insert any object into any opening.
6. Do not use outdoors.
7. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
8. To disconnect, turn all controls to the off ("0") position, then remove plug from outlet.
9. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
10. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
11. Always use the proper needle plate. The wrong plate can cause the needle to break.
12. Do not use bent needles.
13. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
14. Switch the sewing machine off ("0") when making any adjustment in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, and the like.
15. Always unplug the sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.

SAVE THESE INSTRUCTIONS

IMPORTANT

Be sure to keep machine away from static electricity, heat sources, humidity, and direct sunlight.

Controller: MODEL-21371
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**SECTION I**

**Carrying Case**

- Foot control
- Embroidery hoop
- Memory card
- Power supply cord
- Knee lifter

* In some of countries or areas, the machine does not include the knee lifter feature.

**Visual Touch Screen Sharpness Adjustment Knob**

- Foot storage compartment
- Screen sharpness adjustment knob
- Visual touch screen

- Brightness of the screen can be changed by turning the screen sharpness adjustment knob.

---

**Detachable Extension Table**

- Extension table

Sewing accessories are stored in the extension table. To open, lift the cover toward you as illustrated.

---

**For Free Arm Sewing**

- Extension table

To remove, lift out the extension table toward you as illustrated.

---

**For Flat-bed Sewing**

- Tabs
- Base grooves

Position the tabs on the base grooves and push down gently.
Standard Accessories

Each presser foot and pocket is lettered for easy identification and storage. To achieve optimum sewing results, use the foot recommended for each sewing technique.

- **A**: Zigzag foot
- **B**: Darning foot
- **C**: Overedge foot
- **D**: Hemmer foot
- **E**: Zipper foot
- **F**: Satin stitch foot
- **G**: Blind hem foot
- **H**: Cording foot
- **I**: Overcasting foot
- **J**: Patchwork foot
- **K**: Screwdriver
- **L**: Bobbins
- **M**: Scissors
- **N**: Spool pin felt
- **O**: Additional spool pin
- **P**: Embroidery foot
- **Q**: Spool holder
- **R**: Automatic buttonhole foot
- **S**: Quilting bar
- **T**: Walking foot
- **U**: Quilting bar for walking foot
- **V**: Cloth guide
- **W**: Knee lifter
- **X**: Set of needles
- **Y**: Embroidery hoop

*In some countries or areas, the machine does not include the knee lifter feature.*
SECTION II
GETTING READY TO SEW

Connecting the Machine to the Power Supply

Before connecting the power cord, make sure the voltage and frequency shown on the machine conform to your electrical power.

• To sew using foot control
  Turn off the power switch, and insert the foot control plug (1), machine plug (2) into the machine and power supply plug (3) into the wall in this order.

• To sew using start/stop button
  Turn off the power switch, insert the machine plug (2) into the machine and power supply plug (3) into the wall.

• Turn on both the power switch and lamp switch.
  * In ordinary sewing, the start/stop button cannot be used when the foot control is plugged in. (The light on the button will be out.)
  * The foot control cannot be used in embroidery mode.
  * If you turn off the power switch, wait 5 seconds before turning it on again.

For Your Safety

1. While in operation, always keep your eye on the sewing area, and do not touch any moving parts such as the thread take-up lever, handwheel or needle.
2. Always turn off the power switch and unplug from the power supply:
   * When leaving the machine unattended.
   * When attaching or removing parts.
   * When cleaning the machine.
3. Do not place anything on the foot control, except in use.

Controlling Sewing Speed

• To Use Start / Stop Button

This button is to be used for Professional-Style Embroidery. However, it can also be used for ordinary sewing if you wish. The machine starts running slowly for the first few stitches, then it runs at the speed set by the speed setting lever.
  * The light on the button changes from green to red while sewing.

• To Use Foot Control

Sewing speed can be varied by the foot control. The harder you press on the foot control, the faster the machine runs.
  * To use the foot control, slide the speed setting lever to "High".

Note:
The Memory Craft 9000 is equipped with a protective circuit to prevent overheating. The machine will stop automatically if it is running overloaded for a long time. In such a case, follow the message that appears on the visual touch screen.

If you turn off the machine, then turn it on again (without waiting for 5 seconds), the screen may be blank. In this case, turn the machine off and wait 4 to 5 minutes before turning it on again.
Up/Down Needle, Auto-Lock and Reverse Buttons

- **Up/Down Needle Button**
  - When this button is pressed, the needle bar goes down and stops in the lowest position. When pressed again, the needle bar goes up and stops in the highest position.

- **Auto-Lock Button**
  - When stitches 1, 2, 8 or 9 are selected, the machine will immediately sew locking stitches and automatically stop when the auto-lock button is pressed. When sewing all other stitches, the machine will sew locking stitches at the end of the current pattern and automatically stop.

- **Reverse Button**
  - When stitches 1, 2, 8 or 9 are selected, the machine will sew in reverse while the reverse button is pressed. If you press the reverse button when sewing all other stitches, the machine will immediately sew locking stitches and automatically stop.

Winding the Bobbin

- **Removing the Bobbin**
  - Slide the hook cover plate release button to the right, and remove the cover plate.
  - Lift out the bobbin.

Operating Instructions

The symbol "0" of a switch indicates the "off" position of a switch.

In case of appliance with polarized plug:

To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.
**SECTION II**

- **Winding the Bobbin**

  **Ordinary Spool**
  ![Ordinary Spool Diagram]

  **Small Spool**
  ![Small Spool Diagram]

  **Visual Touch Screen**
  ![Visual Touch Screen Diagram]

  **Thread Cutter**
  ![Thread Cutter Diagram]

1. Lift up the spool pin. Place the spool of thread on the spool pin with the thread coming off the spool as shown. Attach the large spool holder, and press it firmly against the spool of thread.

2. The small spool holder is used with narrow or small spools of thread.

3. To use the additional spool pin, guide the upper thread as shown in ②, ④ and then ⑥.

4. (To attach the additional spool pin, see page 60.)

5. Hold the upper thread with both hands and press it downwards into the slit ②.

6. Guide the thread around the thread guide following diagram ③.

7. Thread through the hole in the bobbin from the inside to the outside.

8. Put the bobbin on the bobbin winder spindle, and push it to the right.

9. The visual touch screen shows "Bobbin winding".

10. Hold the free end of the thread in your hand and depress the foot control.

11. Stop the machine when it has made a few turns, and cut the thread close to the hole in the bobbin.

12. Depress the foot control again. When the bobbin is fully wound, it will stop automatically.

13. Return the bobbin winder to its original position by moving the spindle to the left, and cut the thread as shown.

* The machine will not sew until the spindle is in the left position.

* The machine stops automatically after 2 minutes.
• Inserting the Bobbin

1. Place the bobbin in the bobbin holder with the thread running counterclockwise.
2. Guide the thread into the notch "A" on the front side of the bobbin holder.
3. Draw the thread to the left, sliding it between the tension spring blades.
4. Lightly continue to draw the thread until it slips into notch "B".
5. Pull out about 10 cm (4") of thread. Attach the hook cover plate. Check the threading by referring to the chart shown on the hook cover plate.

* Be sure to attach the hook cover plate before sewing.
**SECTION II**

**Threading the Machine**

1. Raise the presser foot lifter. Press the up/down needle button twice to raise the needle (refer to page 5).

2. Hold the upper thread with both hands as shown and press it downwards into the slit.

3. Draw the thread around the thread guides (A) and (B) as shown.

* This machine is equipped with a thread breakage sensor. If the machine is run without thread, it automatically stops after about 10 cycles.

4. Firmly draw the thread from right to left over the take-up lever and down into the take-up lever eye.

5. Then down through the lower thread guide.

6. Slide the thread behind the needle bar thread guide on the left.

7. Thread the needle from front to back or use the needle threader (see page 9).

8. Then down around the check spring holder.

9. Thread take-up lever
• Needle Threader

1. Raise the needle to its highest position. Pull down the needle threader knob as far as it will go.

2. Turn the knob in the direction of the arrow in the illustration, then insert the hook “A” into the needle eye. Lead the thread around the guide “B” and under the hook “A”.

3. Turn the knob in the direction of the arrow in the illustration, then draw the thread loop to the back of the needle.

4. Raise the needle threader knob slowly to draw the thread loop up.

5. Pass the end of the thread through the needle eye by pulling the thread loop to the back.

#11 to #16 needle.

* The needle threader can be used with:

#50 to #100 thread.
• Drawing Up the Bobbin Thread

1. Raise the presser foot lifter. Hold the needle thread lightly with your left hand.

2. Press the up/down needle button twice to pick up the bobbin thread. Draw up the needle thread together with a loop of bobbin thread.

3. Slide 10 cm (4") of both threads to the back under the presser foot.
Selecting Patterns (Ordinary Sewing)

- **Straight, Buttonhole and Utility Sewing Mode Key**
  
  When the power switch is turned on, the menu screen is displayed. A few seconds later, the machine is automatically set to sew a straight stitch.

  - **MODE SELECTION KEYS**
    
    - **ORDINARY SEWING**
    - **AUTOMATIC EMBROIDERY**

  When the key is pressed

- **Patterns 1 to 10**
  
  - **STRAIGHT STITCH**

  When the key is pressed

- **Patterns 11 to 20**
  
  - **ZIPPER STITCH**

  When the key is pressed

- **Patterns 21 to 30**
  
  - **KNIT STITCH**

  When the key is pressed

- **Patterns 31 to 40**
  
  - **GRANDMA GARDEN**

  When the key is pressed

- **Example:** To select pattern 8
  
  1. Press the key on the screen.
  2. Pattern 8 is indicated in the upper left corner of the screen.

* Press the menu key to select other modes.

* Decorative stitches
  (See page 51.)

* Letters and numbers
  (See page 61.)

* Patchwork
  (See page 68.)
SECTION III

Straight Seam Sewing

When the power switch is turned on, the menu screen appears. A few seconds later, the machine is automatically set to sew a straight stitch in the middle needle position.

- Function Keys
  - Stitch Width and Length Key
    When this key is pressed, the stitch width and length can be adjusted.
  - Up/Down Needle Key
    When this key is pressed, the needle bar alternates between up and down position.
  - Bobbin Thread Sensor
    Press this key to see if the bobbin thread is running low.
  - Adjust Key
    To adjust the automatic thread tension level, see page 18.
    To adjust the cloth guide, see page 15.
    To raise and lower the feed dog, see page 16.
    To adjust the free arm, see page 16.
    To change cm/inch indication, see page 15.

- Starting to Sew

1. Raise the presser foot and position the fabric next to a seam guide line on the needle plate (see page 14). Lower the needle to the point where you want to start.

2. Lower the presser foot and pull the threads toward the back. Depress the foot control. Gently guide the fabric along the seam guide line letting the fabric feed naturally.

* When you want to sew reverse stitches at the beginning of a straight seam, do the following: select pattern \( \frac{1}{2} \) or \( \frac{2}{3} \) then press the reverse button, or use pattern \( \frac{3}{8} \) (with automatic reverse stitch).
**Changing Sewing Direction**

Stop the machine and bring the needle down into the fabric by pressing the up/down needle button. Raise the presser foot.
Pivot the fabric around the needle to change sewing direction as desired.
Lower the presser foot.

**Finishing Sewing**

1. For fastening the ends of seams, press the reverse stitch button and sew several reverse stitches.
   * When pattern is selected, reverse stitches are sewn automatically at the beginning of the seam, forward again.
2. Raise the presser foot.
   Remove the fabric, draw the threads to the back and cut using the thread cutter.
3. The threads are cut the proper length for starting the next seam.

**Up/Down Needle Key**

The needle stop position is set at up automatically when the machine is turned on. When this key is pressed, the needle goes to its lowest point.

After finishing sewing, the needle goes to up position.

After finishing sewing, the needle stops in up position.
**To Attach the Knee Lifter**

You can lower or raise the presser foot without your hand by attaching the knee lifter. It can help speed up your sewing.

- Insert the knee lifter in the knee lifter hole.
  (Match the tab on the lifter with the notch in the hole.)

- The presser bar will rise relative to the amount of pressure you put on the knee lifter.

* In some of countries or areas, the machine does not include the knee lifter feature.

**Seam Allowance Lines**

The seam guides on the needle plate and hook cover plate help you measure seam width.

* The number indicates the distance between the middle needle position and the seam allowance line.

**Sewing on Heavy Fabrics**

The black button on foot A will lock the foot in a horizontal position if you push it in before lowering the presser foot. This ensures even feeding at the beginning of seams and helps when sewing many layers of fabric such as sewing over welt seams when hemming jeans.

When you reach the point of an increased thickness, lower the needle and raise the presser foot. Press in the black button, then lower the foot and continue sewing. This button releases automatically after a few stitches.
**Cloth Guide**

- **To Attach**
  Insert the pins on the cloth guide into the holes in the carriage.

- **Setting the guide distance**

**Overcasting**

- **To Change the Centimeter/Inch Indication**
  Measurements which appear on the cloth guide adjusting screen and in patchwork mode can be changed from cm to inch and vice versa as follows:
  1. Press the **ADJ** key.
  2. Press the **in.** or **cm** key. The selected key will be highlighted.
  3. Press the **OK** key to confirm.

Example: When the **cm** key is pressed,

- **Select Pattern 10 and attach the overcasting foot M.**
- **Press the **ADJ** key, and set the cloth guide distance 2 mm by pressing the **平坦** key.**
  (Press the **OK** key to confirm.)
- **Start sewing, feeding the fabric next to the fabric guide.**

* **Note:** Remove the cloth guide when embroidering and when adjusting the drop feed key.
* **To return the cloth guide to its original position, keep pressing the **平坦** key until the **cm** key is indicated.**

* The machine will remember to display in centimeters or inches (whichever you set), even after turning off the power.
**To Raise or Lower the Feed Dog**

- There are two ways to raise or lower the feed dog.

1. Press the **ADJ** key, and press the **FEED DOG** or **FREE ARM** key. (Make sure the needle is in the up position.)

   ![Adjust Feed Dog](image)

2. Slide the drop feed lever with your hand.

   ![Feed Dog Lever](image)

   * The feed dog lowers automatically in the following cases:
     - When the freehand quilting key in patchwork mode is pressed.
     - When the normal embroidery mode key or the edit design mode key is pressed.

**Adjusting the Free Arm**

- The length of the free arm can be adjusted by pressing the **FREE ARM** key after pressing the **ADJ** key.

   ![Adjust Free Arm](image)

   * The needle should be up, and watch for the carriage moving.

   When the **FREE ARM** key is pressed, the carriage moves out of the way.

   ![Free Arm Moving](image)

   For darning knees or elbows.

   For sewing cuffs, skirts and the edges of bags.
Selecting Needle and Thread

For general sewing use needle size 11 or 14. A fine thread and needle should be used for sewing lightweight fabrics, so the fabric will not be marred. Heavy fabrics require a needle large enough to pierce the fabric without fraying the needle thread.

In the needle case you will find one size 14, three blue tipped needles and one twin needle. Use the blue tipped needle to eliminate skipped stitches when sewing knits and synthetic fabrics.

There are also specialty needles available from your sewing machine dealer. A denim needle with a sharp tip is used to effectively pierce dense fabrics such as denim and canvas. For topstitching, a special topstitching needle with a larger eye accommodates heavier weight thread. Leather needles punch small holes in leather and suede allowing the thread to follow through the hole.

Check your needles frequently for rough or blunt tips. Snags and runs in knits, fine silks and silk-like fabrics are permanent and are often caused by damaged needles.

Always purchase a good quality thread. It should be strong, smooth and consistent in thickness.

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FABRIC</th>
<th>TYPE OF NEEDLE</th>
<th>NEEDLE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Light</td>
<td>Chiffon, Georgette, Fine Lace, Organdy, Organdy Net, Tulle</td>
<td>Universal</td>
<td>9 (65)</td>
</tr>
<tr>
<td></td>
<td>Batiste, Voile, Lawn, Pure Silk, Crepe de Chine, Sheer Crepe, Chambray, Handkerchief Linen, Gingham, Challis, Percalle, Wool Crepe, Peau de Soie, Taffeta, Satin, Silk Surah, Satin-backed Crepe, Qiana</td>
<td>Ball Point</td>
<td>9 (65)</td>
</tr>
<tr>
<td>Light</td>
<td>Single Knits, Jersey, Swimwear, Tricot</td>
<td>Blue Tipped Needle</td>
<td>11 (75)</td>
</tr>
<tr>
<td></td>
<td>Leather, Suede</td>
<td>Universal</td>
<td>11 (75)</td>
</tr>
<tr>
<td></td>
<td>Flannel, Velour, Velvet, Muslin, Velveteen, Poplin, Corduroy, Broadcloth, Linen, Chintz, Gabardine, Felt, Terry, Buriap, Quilted Fabrics</td>
<td>Ball Point</td>
<td>14 (90)</td>
</tr>
<tr>
<td>Medium</td>
<td>Double Knits, (synthetic and natural) Stretch Velour, Stretch Terry, Sweater Knits</td>
<td>Universal</td>
<td>14 (90)</td>
</tr>
<tr>
<td></td>
<td>Leather, Vinyl, Suede</td>
<td>Wedge Point Leather Needle</td>
<td>14 (90)</td>
</tr>
<tr>
<td>Heavy</td>
<td>Denim, Sailcloth, Ticking</td>
<td>Denim Needle</td>
<td>16 (100)</td>
</tr>
<tr>
<td></td>
<td>Double Faced Wool, Heavy Coating, Fake Fur, Drapery Fabrics</td>
<td>Universal</td>
<td>16 (100)</td>
</tr>
<tr>
<td></td>
<td>Leather, Suede</td>
<td>Wedge Point Leather Needle</td>
<td>16 (100)</td>
</tr>
<tr>
<td>Very Heavy</td>
<td>Canvas, Duck, Upholstery Fabrics</td>
<td>Universal</td>
<td>18 (110)</td>
</tr>
<tr>
<td></td>
<td>Topstitching for Special Finish</td>
<td>Topstitching Needle</td>
<td>11 (75)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14 (90)</td>
</tr>
</tbody>
</table>
Balanced Thread Tension

Since the computer incorporated in Memory Craft 9000 has been programmed for the amount of needle thread necessary for each pattern, you are always assured of having beautiful stitches by setting the thread tension at "Auto" for ordinary sewing.

< Correct Tension >
- In straight stitching, the needle thread and the bobbin thread cross in the middle of the fabric.
- In zigzag stitching, the needle thread should appear slightly on the wrong side of the fabric.

- Manual Thread Tension
When using special sewing techniques such as automatic gathering or using heavy thread, adjust the thread tension until the best results are obtained. Also it is recommended to manually adjust thread tension in accordance with individual characteristics of fabric and thread, such as thick, or layered fabric.

- The needle thread is too tight
  - The bobbin thread appears on the upper surface of the fabric.
  - Press [MANUAL] on the visual touch screen, then press [↓] to decrease the number.

- The needle thread is too loose
  - The bobbin thread appears on the underside of the fabric.
  - Press [MANUAL] on the visual touch screen, then press [↑] to increase the number.

- Auto Thread Tension
The "Auto" (default) thread tension can be altered to suit your sewing needs. First, press the [ADJ] key.

- For general sewing, set the thread tension level to "Auto".
- In accordance with the kind of fabric and thread, if the thread tension is too tight, decrease it by pressing the [−] key.
- If the thread tension is too loose, increase it by pressing the [+] key.
- After changing the level, press the [OK] key to confirm.

* "−" mark indicates a looser setting
* "+" mark indicates a tighter setting
* New settings stay memorized even when you turn off the machine.
* Change the thread tension level when performing Professional Style Embroidery in the same way.
To Snap On and Snap Off the Presser Feet

1. Press the up/down needle button to raise the needle to its highest position and raise the presser foot.

2. Press the red button on the back of the foot holder. The presser foot will drop off.

3. Place the selected presser foot so the pin on the foot lies just under the groove of the foot holder. Lower the presser bar to lock the foot in place.

Pressure Dial

The pressure dial should be set at "3" for regular sewing. Reduce the pressure to "2" for applique, cutwork, drawn work, basting and embroidery.

Set the pressure to "1" when sewing chiffon, lace, organdy and other fine fabrics. Velours and knits with a lot of stretch may also require a "1" setting. Align the number on the dial with the setting mark.

<Additional Presser Foot Clearance>

The presser foot can be raised higher for additional clearance.
SECTION III

To Remove and Attach the Foot Holder

To Remove
Remove the thumb screw by turning the screw counterclockwise with the screwdriver.

To Attach
Align the groove on the foot holder with the threaded hole on the presser bar and screw the foot holder screw into the hole. Tighten it with the screwdriver.

Walking Foot

The walking foot is effective for preventing the fabric (light materials, knits, real and simulated leather, etc.) from slipping or puckering, because it sandwiches the material between upper and lower feed dogs. The quilting guide can also be attached to make it easier to sew parallel lines.

1. Raise the needle, and the presser foot.
2. Remove the foot holder.
3. Attach the walking foot to the presser bar with the lever over the needle clamp screw, and secure it with the thumb screw.
* Operate the machine at low to medium speed.

<To Attach the Quilting Bar for Walking Foot>

1. Push the quilting bar into the groove on the rear of the foot.
2. Slide the quilting bar to the right or left where desired.
Changing Needles

1. A number indicating needle size is marked on the needle shank. The higher the number, the heavier the needle. Raise the needle by pressing the up/down needle button and lower the presser foot.

2. Turn off the power switch.

3. Loosen the needle clamp screw by turning it counterclockwise. Remove the needle from the clamp.

4. Insert the new needle into the needle clamp with the flat side to the rear. When inserting the needle into the clamp, push it up as far as it will go and tighten the clamp screw firmly.

* Bent or blunt needles may cause skipped stitches or breaking thread.
* Always purchase a good quality needle.
### Straight Stitches

<table>
<thead>
<tr>
<th>Actual Stitch</th>
<th>Needle Position</th>
<th>Visual Touch Screen</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Middle</td>
<td><img src="image" alt="STRAIGHT STITCH" /></td>
<td>This stitch can be used for sewing regular seams, zippers, pintucking and rolled hems.</td>
</tr>
<tr>
<td>2</td>
<td>Left</td>
<td><img src="image" alt="STRAIGHT STITCH" /></td>
<td>This stitch can be used for regular seams, zippers, topstitching, etc.</td>
</tr>
<tr>
<td>3</td>
<td>Middle</td>
<td><img src="image" alt="LOCK-A-MATIC" /></td>
<td>The machine will sew four stitches forward, four stitches in reverse, then continue sewing forward. When you reach the end edge of the fabric, press the reverse button once. The machine will sew four reverse stitches, four forward stitches, then stop sewing automatically.</td>
</tr>
<tr>
<td>4</td>
<td>Middle</td>
<td><img src="image" alt="LOCKING STITCH" /></td>
<td>Displayed when sewing the locking stitch. Lower the needle close to the front edge of the fabric. The machine will sew several locking stitches in place and continue sewing forward. By pressing the reverse button, the machine will sew several locking stitches in place, then stop sewing automatically.</td>
</tr>
<tr>
<td>5</td>
<td>Middle</td>
<td><img src="image" alt="TRIPLE STRETCH STITCH" /></td>
<td>This strong, durable stitch is recommended where both elasticity and strength are needed to insure comfort and durability. Use it to reinforce areas such as crotch and armhole seams. Also use when constructing items such as backpacks for extra strength.</td>
</tr>
<tr>
<td>6</td>
<td>Middle</td>
<td><img src="image" alt="STRETCH STITCH" /></td>
<td>This stitch is a narrow stretch stitch designed to eliminate puckering on knit fabrics and bias seams, while permitting the seam to be pressed completely flat. The stitch can also be used to simultaneously seam and overcast when sewing on tricot and chiffons for a narrow, almost invisible seam or seam finish.</td>
</tr>
</tbody>
</table>
- Manual Stitch Length

○ By pressing the [▼] key, the stitch length can be adjusted manually. To decrease, press the [▼] key. To increase, press the [▼] key.

The programmed stitch length setting will be suitable for most of your sewing needs; however, you can change the programmed settings to accommodate different fabric characteristics or achieve a desired effect.

Hold down the [▼] or [▼] key until you reach the setting you desire.

* Keep pressing the [▼] or [▼] key to make the number on the display change fast.

* The reverse stitch length cannot be set longer than 2.5 mm (3/32”).

○ By pressing the [▼] key again, the visual touch screen will return to the former display.

- Variable Needle Position

○ When the patterns listed below are selected and the needle position key ([▼] or [▼]) is pressed, you can move the needle to any position desired.

| Straight stitches | 1 | 2 | 3 | 4 | 5 | 7 | 25 | 42 | 53 |
| Quilting stitches | 154 | 159 | 156 | 157 |
Gathering

1. Press the key.

② A message will appear concerning the amount of bobbin thread. Change the bobbin thread when "Bobbin thread almost out" is indicated.

SUFFICIENT BOBBIN THREAD

BOBBIN THREAD ALMOST OUT

Select straight stitch

- Manual thread tension
- Stitch length 3.0 - 5.0

Sew two rows of straight stitching to gather medium weight fabrics.
Sew the first row guiding foot A next to the raw edge.
Sew the second row guiding foot A next to the first row.
Pull on the bobbin threads simultaneously from each end of the fabric until the desired amount is gathered.
Knot the threads at each end and distribute the gathers evenly.
Last, sew between the two rows of stitching to secure the gather.
Quilting

Quilting is produced by stitching two layers of fabric together with batting in between to add dimension and warmth. Traditionally used for bedspreads, quilting is now seen everywhere. Crafts, entire garments, or parts of garments such as yokes, pockets, cuffs, and collars can be sewn with straight rows of quilting or embellished with decorative stitches and pattern combinations.

1. The quilting bar will help to keep the stitching lines straight. Loosen the quilting bar screw. Slide the quilting bar in the opening to the desired width and tighten the screw.

2. Sew guiding the quilting bar over the previous row of stitching.

Pintucking

Select straight stitch

1. Cloth guide distance
(1 mm ~ 3 mm)

Quilting bar holding screw

(1) Fold the fabric with wrong sides together. Position the folded edge next to the fabric guide.
(2) Lower the presser foot. Sew the folded edge, guiding it along the fabric guide.
(3) Press the pintucks to one side.
SECTION III

Zigzag Stitch and Overcasting

Simple zigzag stitching is widely used for overcasting, applique, etc.

- Zigzag stitch

- Overedge and Overcasting

* Stabilize with interfacing on stretch fabric.
* Place the edge of the fabric next to the black prong on foot C.
* Do not change the stitch width when using the overcasting stitch.

- Manual Stitch Width

Press the \[ \text{ key to adjust the stitch width manually.}

To decrease, press the \[ key. To increase, press the \[ key.

The pre-programmed stitch width settings will be suitable for most of your sewing needs. However, you can change the settings to accommodate different fabric characteristics or achieve a desired effect.

Hold down the \[ or \[ key until you reach the setting you desire.

* If you press and hold the \[ or \[ key, the number on the display changes fast.

* By pressing the \[ key, the visual touch screen will return to the former display.
## Overcasting Guide

<table>
<thead>
<tr>
<th>Actual Stitch</th>
<th>Stitch Selection</th>
<th>Visual Touch Screen</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Foot A or C</td>
<td>ZIGZAG STITCH</td>
<td>This stitch can be used on most woven fabrics. It's the fastest way to finish an edge leaving it neat and flat. A dense zigzag used for applique.</td>
</tr>
<tr>
<td>9</td>
<td>Foot A</td>
<td>MULTIPLE ZIGZAG</td>
<td>This stitch is used to finish seam allowance on synthetics and other fabrics that tend to pucker. The stitch is excellent for darning and mending tears in fabric.</td>
</tr>
<tr>
<td>10</td>
<td>Foot C</td>
<td>OVERCASTING</td>
<td>This stitch can be used to simultaneously stitch and overcast seams in one step. Use this stitch when you do not need to press seams open flat. Test the stitch on the actual fabric for the best results.</td>
</tr>
<tr>
<td>21</td>
<td>Foot A</td>
<td>KNIT STITCH</td>
<td>This stitch is recommended for sewing such fabrics as swimwear and stretch velour as it provides the greatest amount of elasticity and strength.</td>
</tr>
<tr>
<td>22</td>
<td>Foot C</td>
<td>DOUBLE OVEREDGE STITCH</td>
<td>This stitch is an excellent stitch for fabrics that tend to fray extensively such as linens and gabardines. Two rows of zigzag stitches are simultaneously sewn over the edge to insure that your seams will not ravel.</td>
</tr>
<tr>
<td>23</td>
<td>Foot M</td>
<td>OVERLOCK STITCH</td>
<td>This stitch finishes the edges of your seams similar to a commercial overlocking machine for a professional look.</td>
</tr>
</tbody>
</table>
### Sensor Buttonholes

**Buttonhole Guide**

<table>
<thead>
<tr>
<th>Actual Stitch</th>
<th>Stitch Selection</th>
<th>Visual Touch Screen</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>SENSOR</td>
<td>SENSOR BH</td>
<td>For buttonholes on shirts and blouses.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PULL DOWN BH LEVER</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>ROUNDED</td>
<td>ROUNDED BH</td>
<td>For buttonholes on shirts and blouses made of fine fabric.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PULL DOWN BH LEVER</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>KEYHOLE</td>
<td>KEYHOLE BH</td>
<td>For buttonholes on jackets.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PULL DOWN BH LEVER</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>KNIT</td>
<td>KNIT BH</td>
<td>For buttonholes on knits.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PULL DOWN BH LEVER</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>KNIT</td>
<td>KNIT BH</td>
<td>For buttonholes on stretch fabrics.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PULL DOWN BH LEVER</td>
<td></td>
</tr>
</tbody>
</table>
**Preparation for Sewing**

Select pattern R

* The size of buttonhole is automatically set by placing the button in the rear of the automatic buttonhole foot R.
* The button holder of the foot takes a button size up to 2.5 mm (1") in diameter.
* Adjust buttonhole width to match the material and thread (see page 31).
* Make a test buttonhole on an extra piece of the fabric to check your settings.
* Place the button on the fabric sample and mark the top and bottom to determine the position of buttonhole.
* Use interfacing on stretch fabrics.

**To Sew**

1. Press the up/down needle button to raise the needle. Raise the presser foot.
2. Attach the automatic buttonhole foot R.

3. Pull the button holder to the back, and place the button in it. Push it together tightly on the button.

* If the button is extremely thick, make a test buttonhole. If it is difficult to fit the button through the test buttonhole, you can lengthen the buttonhole by pulling the carriage on the foot back a little extra. The length of the hole will be automatically increased.
4. Insert corner of fabric under the foot.
   Press the up/down needle button twice.
   Remove the fabric to the left to draw both threads under the foot.
   Insert the garment under the foot, and lower the needle at the starting point. Then lower the automatic buttonhole foot.

5. Pull the buttonhole lever downward as far as it will go.
   There should be no gap between the slider and spring holder of the foot as shown below.

6. Depress the foot control until the machine stops by itself.
   * The buttonhole will be automatically sewn. The front bartack and left row first, then the right row and back bartack. The machine will stop automatically when the buttonhole is completed.
7 To sew another buttonhole or to start from the beginning of the buttonhole, press the [REPEAT] key, then depress the foot control.

* When buttonhole sewing is finished, push the buttonhole lever upward as far as it will go.

8 Remove the fabric and place a pin just below the bartack at each end to prevent accidentally cutting bar tacks. Cut the opening with the seam ripper.

** To Alter Buttonhole Stitch Width

- Press the [↓] key. The buttonhole width indicator shows 5.0.
- To alter the width press the [−] or [+] key.
- The width can be altered between 2.5 and 7.0 mm.

** To Alter Buttonhole Stitch Density

- Press the [↑] key. The stitch length indicator shows 0.45.
- To alter the density press the [−] or [+] key.
- The density can be altered between 0.2 and 0.8 mm.

* When patterns 14, 15 or 16 are selected, the stitch width and density can be altered in the same manner as above.
Rounded and Keyhole Buttonholes

Select pattern \( \text{II}^{12} \) or \( \text{II}^{12} \).

The buttonhole will be automatically sewn as shown below.

For sewing, use the same procedure as when the pattern \( \text{II}^{11} \) is selected.
(See pages 29 to 31.)

- Sewing Buttonholes on Heavy Fabrics

Adjust the stitch density according to the material and thread.

- The width and density can be altered.
  
  \[
  \begin{align*}
  \text{(Width)} & \rightarrow 2.5 \text{ to } 5.5 & \text{(Density)} & \rightarrow 0.2 \text{ to } 0.8 \\
  \text{Keyhole} & \rightarrow 5.5 \text{ to } 7.0 & \text{Rounded} & \rightarrow 0.2 \text{ to } 0.8
  \end{align*}
  \]

- By pressing the \( \text{key} \), the visual touch screen will return to the former display.
Corded Buttonhole

Select pattern \[ \text{SCE, SDR} \]

For sewing, use the same procedure as when the pattern set \[ \text{SCE, SDR} \] is selected. (See pages 29 to 31.)

* Set the stitch width in accordance with the thickness of the cord used.

1. With the buttonhole foot raised, hook the filler cord on the spur at the back of the buttonhole foot.
2. Bring the ends toward you under the buttonhole foot clearing the front end.
3. Hook the filler cord into the forks on the front of foot R to hold them tight.
4. Lower the needle into the garment where the buttonhole will start and lower the foot.
5. Depress the foot control gently and sew the buttonhole. Each side of the buttonhole and the bartacks will be sewn over the cord.
6. Remove the fabric from the machine and cut the sewing threads only.
7. Pull the left end of the filler cord to tighten it.
8. Thread the end through a darning needle, draw to the wrong side of the fabric and cut.

* To cut the buttonhole opening, refer to the instructions on page 31.
Automatic Buttonhole

Select pattern AUTO

* To alter the stitch width and density, refer to page 31.
* If there is a difference in stitch density between the right and left rows of the buttonhole, refer to page 72.

① Pull the button holder all the way out.
② Insert fabric under the foot. Press the up/down needle button twice. Remove the fabric to the left to draw both threads under the foot.
③ Insert the garment under the foot, and lower the needle at the starting point. Then lower the automatic buttonhole foot.

④ Sew down the left side stopping at the end of the buttonhole mark.
Press the reverse button.
5) Depress the foot control. The machine will automatically bartack and sew up the right side of the buttonhole. Stop the machine when you are directly opposite the first stitch on the left hand side. Press the reverse button.

6) Keep the foot control depressed. The machine will bartack, knot the stitches and automatically stop when the buttonhole is completed.

7) To make the next buttonhole, position the fabric and step down on the foot control.
   * The Memory Craft 9000 will sew another buttonhole identical to the first each time you step down on the foot control.
   * To cut the buttonhole opening, refer to the instructions on page 31.
Sewing on Buttons

To Attach the Button Sewing Foot

1. Insert the rear pin on foot into the groove of the foot holder.
2. Gently lower the presser bar, holding the foot with your fingers.

To Sew

1. Drop the needle into the left hole of the button by turning the handwheel.
2. Place the button under the presser foot. Lower the presser foot, positioning both holes in button laterally.
3. Raise the needle by turning the handwheel. Press the key, then adjust the needle over the right hole of the button by pressing the or key.
4. Start sewing. The machine stops automatically upon completion of sewing.

* Raise the feed dog after finishing sewing.

* See page 37 for how to sew a button with a shank.
To Sew a Button with a Shank

1. Manually set the thread tension to 5.0 (see page 18).
2. Drop the needle into the left hole of the button by turning the handwheel.
3. Place the button under the presser foot. Lower the presser foot, positioning both holes in button laterally.
4. Raise the needle by turning the handwheel. Press the key, then adjust the needle over the right hole of the button by pressing the or key.

5. Drop the needle into the right hole of the button by turning the handwheel, then raise the presser foot lifter.
6. Place the button shank plate under the button. (If there is still not enough room, pushing up on the lifter will raise the foot to its maximum height.)
7. Lower the presser foot lifter.
8. Sew until the machine stops automatically.

9. Cut the beginning needle thread.
10. Pull the ending needle thread and bobbin thread out between the button and fabric.
11. Wind both threads in opposite directions around the thread shank a few times and tie them together.

* Raise the feed dog after finishing sewing.
SECTION III

Darning

Select pattern 18.

The Memory Craft 9000 automatically darns rips and holes. Large and small holes can be mended quickly and easily with this unique stitch.

Automatic buttonhole foot R is used to hold the fabric securely while darning.

For extra support, or to strengthen the darn, pin or baste a backing fabric such as organdy under the hole.

* The stitch length and width cannot be adjusted manually.

1. Pull the button holder to the rear.
2. Place the garment under the foot. Press the up/down needle button twice. Remove the fabric to the left to draw both threads under the foot and put the fabric back under the foot.
3. Lower the foot. Press down the foot control. The machine will lock stitch, sew 16 rows of darning, lock stitch and stop automatically.
4. For darning a length of less than 2 cm, first stop the machine after sewing the desired length and then press the reverse button. The required length has now been determined. Now, restart the machine and continue sewing until the machine stops automatically.

To memorize darning stitches:
- When repeatedly sewing the same-size darn to repair a side rip, restart sewing by pressing the start/stop button.

The size of one darn cycle is variable. However, the maximum stitch length is 2 cm (3/4”) and the maximum stitch width is 0.7 cm (5/32”).

Length required

Displayed upon completion of sewing.
To Adjust the Evenness of Darning Stitches (Press the \[=\] key.)

If one side of the darn is higher or lower than the other, make them even by pressing the \[-\] or \[+\] key.

* After sewing, return to the former display by pressing the \[<>\] key.
Bartacking

Density and width can be varied by manually changing the stitch length and stitch width.

The maximum length bartack is 1.5 cm (5/8"): 1.5 cm

Sew to the length required, then press the reverse button. The length is memorized. Depress the foot control until the machine stops automatically.

Repeat bartacking
- The bartack can be repeated by pressing the start/stop button, after the first bartack is sewn.
- If a longer bartack is required, move the fabric and sew an additional bartack until the required length is obtained.
- Every time you press the start/stop button, the same length bartack will be sewn.
Basting

The basting stitch can be used to hold two or more layers of fabric together temporarily. Use a fine needle so as not to leave permanent needle marks.

* Lower the feed dog and attach the darning foot. Refer to the instructions on page 73.

1. Draw both needle and bobbin threads to the back.
2. Depress the foot control. The machine will take one stitch and stop automatically. Release the foot control.
3. Hold the fabric taut and slide it to where you want the next stitch. Depress the foot control.
4. Continue in this manner sliding the fabrics sideways or forward.

* When basting is completed, reset the pressure dial, replace foot holder, and raise the feed dog.
Select pattern E: Zipper foot

- **To Snap On the Zipper Foot**
  - When the left side is sewn.
  - When the right side is sewn.
  - Fit the pin on the zipper foot into the groove on the foot holder.
  - To sew the right side of the zipper, attach the zipper foot on the left-hand side.
  - To sew the left side of the zipper, attach the zipper foot on the right-hand side.

- **Fabric Preparation**
  - Confirm the opening size.
  - Add 1 cm to the zipper size. This is the overall opening size.

- **Baste, then sew straight stitch.**
  - Place right sides of fabric together and sew to the end of the zipper opening. Reverse stitch to lock the stitches.
  - Manually increase the stitch length to 4.5 and sew the zipper opening.
To Sew

1. Fold back the left seam allowance. Turn under the right seam allowance to form a 0.2 to 0.3 cm (1/8") fold. Place the zipper teeth next to 0.2 to 0.3 cm (1/8") fold and pin in place.

2. Attach the zipper foot with the pin on the right hand side.

3. Lower the zipper foot on the top side at the bottom of the zipper so that the needle pierces the fabric next to the fold and the zipper tape.

4. Sew through all layers next to fold. Stop just before the zipper foot reaches the slider on the zipper tape. Lower the needle slightly into the fabric. Raise the zipper foot and open the zipper. Lower the foot and stitch the remainder of the seam.

5. Close the zipper and spread the fabric flat with the right side facing up. Baste the opened fabric and zipper tape together.
6. Move the zipper foot to the left pin.
7. Guide the edge of foot along the zipper teeth and stitch through the garment and zipper tape.
8. Stop about 5 cm (2") from the top of the zipper.

9. Lower the needle slightly into the fabric, raise the foot, remove the basting stitches and open the zipper. Lower the foot and stitch the remainder of the seam making sure the fold is even.
Blind Stitch Hemming

Select pattern 24 or 25.

* Use pattern 24 for woven fabrics and pattern 25 for stretch fabrics.
* Attach the foot G.

<Folding the Fabric>

0.7 ~ 0.8 cm
Wrong side of fabric

- Changing Needle Position
Press the key. The hemming width indicator shows 0.6.

Position the fabric so that the folded edge comes to the left side of guide. Lower the presser foot.
Adjust the position of needle swing with the stitch width key so that the needle just pierces the folded edge of the fabric when the needle comes over to the left side.
Sew guiding the folded edge along the guide.
For a professional looking hem, fold the fabric reducing the width to about 0.2 cm (1/8”).
As you sew, the right hand stitch will fall off the fabric edge forming a chain stitch.

* “0.5” on the visual touch screen indicates the distance between the guide and the needle point.
SECTION III

Rolled Hem

- **Straight stitch rolled hem**: Select straight stitch 1.
- **Zigzag stitch rolled hem**: Select pattern 8. Stitch width 1.0 - 2.0

* The sewing method is the same for either stitch.
* Attach the foot D.

1. Make a double 0.3 cm (1/8") fold approximately 6 cm (2") in length.

2. Lower the needle into the fabric at the point where sewing is to begin. Then lower the hemmer foot.

3. Sew 3 or 4 stitches while holding the needle and bobbin threads. Lower the needle into the fabric and lift the hemmer foot. Insert the folded portion of the fabric into the curl of the hemmer foot.

4. Lower the hemmer foot, then sew by lifting up the edge of the fabric to keep it feeding smoothly and evenly.

<Trimming>

0.7 cm

Cut off here

Trim about 0.7 cm (1/4") from corners to reduce bulk.
**Fagoting**

- Select pattern
  - Patterns 26 or 24 can also be used.

This is an open stitch used to join two pieces of fabric adding design interest to plain garments. Topstitching thread in the needle and bobbin gives a hand-worked appearance.

Fold under 1.5 cm (5/8") on each fabric edge and press.

Pin the two edges to paper, 0.3 cm (1/8") apart.

Sew slowly guiding the fabric so the needle catches the folded edge on each side.

**Scallop Hems**

- Select pattern
  - Pattern 146

Fold hem with right sides together. Sew scallops 1 cm (3/8") from folded edge.

Trim close to stitching leaving 0.3 cm (1/8") seam allowance. Clip seams as shown or trim with pinking shears.

Turn the hem to right side and press.

**Edging**

- Select pattern
  - Pattern 146 or 147 can also be used.

Some of the craft patterns can be used to attractively finish the edges of collars, pockets and placemats.

To edge a collar, place interfacing between upper and under collar and sew the pattern on the seam line.

For delicate appearance on fabrics such as chiffon, use a single layer with a tear-away backing if necessary.

After sewing, trim fabric close to stitching taking care not to cut the thread.

* When sewing curved edges, reduce the pressure and sew slowly.

---

<table>
<thead>
<tr>
<th>Stitch Width</th>
<th>Stitch Length</th>
<th>Seam Variations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Setting</td>
<td>7.0</td>
<td>2.5</td>
</tr>
<tr>
<td>5.0</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>7.0</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>
### Drawn Work and Fringing

Drawn work and fringing add a special touch on table linens and shawls. Choose a firm, woven fabric such as linen where threads can be removed easily.

**Carefully cut the fabric on grain.**
Determine the width of the drawn work and remove one yarn or fabric thread at each end.

**Sew down the left side guiding the fabric so the right hand stitches fall in the open space.**
After finishing the left side, turn the fabric around 180 degrees. Then sew down the right side.
Remove the yarns or fabric threads between the stitching.

**Fringing is sewn in the same way.**
Remove a single yarn where fringing is to begin and stitch. Remove the remaining yarns.

- **Reset the pressure dial to “3” after sewing.**

* **Pattern \( P \) can be “turned-over”, and the left side of the fabric can be sewn when the turn-over memory key [149] is selected (see page 52).*

---

### Cutwork

**Select pattern \( 26 \).**

- **Pressure dial**

* **Pattern \( 27 \) can also be used.**

* **When using pattern \( 26 \)**:
  - Stitch width 2.0 to 2.5
  - Stitch length 0.3 to 0.5

**Choose a simple design and trace the outline on the right side of the fabric.**
Place a piece of tulle or organdy under the design and pin in place. Using a different color will accent your work.
Baste the layers together stitching just inside the outline. Remove pins.
Stitch around the design in pattern \( 26 \) or use a narrow satin stitch.
Remove basting and cut the fabric close to the stitching with embroidery scissors.
Applique

Applique, a technique for stitching fabric shapes onto another fabric, opens limitless design possibilities. Dimension and texture can be added by lightly stuffing all or part of a design. This machine has several different patterns that can be used to enhance your applique.

Select pattern 26.

- Pressure dial
- Pattern 27 can also be used.

In this type of applique raw edges are folded under. To finish the raw edge, cut the applique design out of cardboard. Fuse a lightweight interfacing to the wrong side of the fabric then cut the fabric slightly larger than the cardboard. Fold the fabric around the cardboard and press to form a perfectly shaped design. Tape the applique in place and sew, guiding the slit on foot F next to the finished edge of the applique.

Shell Stitch

Select pattern 26.

- Use a lightweight fabric such as tricot.

Fold and stitch on the bias.
- Set the stitch width and length as you desire.
- You may need to tighten the top thread slightly.
- Allow the needle to just clear the folded edge of the fabric when it zigzags.

If you sew rows of shell stitches, space the rows 1.5 cm (5/8") apart.

You can sew shell stitches on knits or soft silky wovens in any direction. After sewing, set the thread tension to "AUTO".
Lace Work

Select pattern 26.

- Patterns 35, 37, 38, 48, or 86 can also be used.

Right side of fabric

Lace adds a fanciful, feminine touch to blouses and lingerie. Table linens and pillows become more elegant when trimmed with lace.

Fold the raw edge under the hem and place the lace under the folded edge. Then sew the pattern stitch making sure the lace is caught in the stitching.

Lace can be inserted down the front of a blouse by zigzag stitching each side of the lace onto the fabric. Cut away the fabric beneath the lace for a romantic, sheer look.

Eyelets

Select pattern 129.

Eyelet

Bolt

The pattern 129 can be used to sew a small eyelet for belts passing cord, etc.

Press down the foot control. The machine will sew an eyelet and stop automatically.

Remove the fabric and cut the small eye with the seam ripper, pointed scissors or awl.

Grandma Garden

Select pattern 94.

- Patterns 26 or 87 can also be used.

Select pattern 84 and press the M key three times, then select pattern 90 (locking stitch) and press the M key once. (See page 53.)

Press the up/down needle key on the visual touch screen so the needle will stop in the up position. (See page 13.)

Set the sewing speed to medium. (See page 4.)

Lower the needle at the starting point, and sew the patterns until the machine stops automatically.

Lower the needle at the end point, and turn the fabric 90 degrees.

Sew the second row until the machine stops automatically.

Complete the square pattern, repeating the same procedure.
Decorative Stitching

- To Select a Decorative Pattern (Press the decorative stitch mode key \[ \text{DECORATIVE} \]. See page 11.)
- To change the display press the \[ \text{AUTO} \] key to advance to the next bank of decorative patterns and \[ \text{MANUAL ADJ.} \] key to go back to the last bank of decorative patterns.

1. Patterns 41 to 50
   - Patterns 51 to 60
   - Patterns 61 to 70
   - Patterns 71 to 80
   - Patterns 81 to 90
   - Patterns 91 to 100
   - Patterns 101 to 110
   - Patterns 111 to 120
   - Patterns 121 to 130
   - Patterns 131 to 140
   - Patterns 141 to 150

Example: To select pattern 41

1. Press the center of pattern 41 on the display.
The pattern and appropriate foot are indicated on the top of the visual touch screen.
• Function Keys
  o Stitch width and length key
    For changing the stitch width and length.
  o Elongation key
    For elongation of the pattern (see page 55).
  o Size key
    For setting the size of the pattern (see page 57).
  o Combination key
    For combining the patterns (see page 53).
      * When the combination key is pressed, the keys below appear on the bottom of the display.
        When pressed again, the former display returns.

\[
\begin{array}{c}
\text{Memory key} \\
\text{Turn-over memory key} \\
\text{Store key} \\
\text{Recall key} \\
\text{Clear key} \\
\text{Memory check key} \\
\text{Beginning key}
\end{array}
\]

- Memory key  For memorization of the pattern (see page 53).
- Turn-over memory key  For memorization of the pattern in mirror image (see page 53).
- Store key  For storing the pattern (see page 65).
- Recall key  For recalling the stored pattern (see page 65).
- Clear key  For clearing memorized pattern (see page 53).
- Memory check key  For checking the memorized pattern (see page 66).
- Beginning key  For indicating the beginning of a memorized pattern (see page 53).
• One Cycle Stitching

1. Memorize the pattern, then the locking stitch.
   (The locking stitch is already included in the beginning of the pattern.)

2. Cycle stitching when the locking stitch is not memorized.
   (When the locking stitch button is pressed after sewing is started, the locking stitch is automatically sewn at the end of the current pattern, and sewing stops.)

• Memory Key \([\text{M}]\)

When this key is pressed after selecting a pattern, the pattern will be memorized as many times as the key is pressed. When the key is pressed after selecting another pattern, that pattern will be memorized after the previously memorized pattern.

• Turn-over Memory Key \([\text{TOP}]\)

When this key is pressed after selecting a pattern, the pattern will be memorized in mirror image. The visual touch screen will show the pattern turned-over.

• Clear Key \([\text{C}]\)

When this key is pressed before starting sewing, the memorized program is cleared one by one. When the key is pressed after starting sewing, the entire memorized program is cleared.

• Beginning Key \([\text{BEB}]\)

If you are sewing a series of memorized stitches and you stop sewing in the middle of the series, you can start again from the beginning by pressing this key.
• Combining Patterns

1

2

3

4

5

6

• Combining Turned-Over Patterns

1

2

3

4

5

6

* To stop sewing at end of a pattern, press the auto-lock button while sewing the pattern. A complete pattern will be sewn and the machine will stop automatically upon completion.

To stop sewing in the middle of a pattern sequence, stop, press auto-lock and depress the foot control. A locking stitch will be sewn and the machine will stop automatically.
Elongated Stitches

Select pattern \( \frac{45}{45} \).

* Patterns 41 to 59 can be elongated (except the locking stitch).

- These stitches can be elongated up to five times their normal length by pressing the \( \frac{\text{Left/Right}}{} \) key.

* The elongated size is indicated under the selected pattern.

When the width or length of stitch is changed, a greater variety of patterns are available.
Cording

- **Triple Cording**
  - Select pattern 49
  - H: Cording foot

- **Single Cording**
  - Select pattern 3
  - Stitch width 3.0
  - H: Cording foot
  - For single cording, insert the cord in the center groove of foot H.

Sew over one strand of cording to create a pretty swirled design on a jacket or vest or sew over three strands of cording for border trims. Pearl cotton, knitting yarn, embroidery floss, lace thread, fine wool or lily yarn can be used for cording.

---

Mark the design on the right side of the fabric. Slide the sewing threads to the left and insert three strands of cording into the slots of foot H with 10 cm (4") extending behind the foot.

The slots on foot H will hold the lengths of cording in place while the stitches form over the cording. Stitch slowly and smoothly turning the fabric as you sew while guiding the cording over the marked line.

* You may want to reduce the pressure when sewing curves.*
One Point Pattern Sewing

- Memory Lock Patterns

To sew a crocodile, for example, select pattern 76.

Depress the foot control and sew until the machine stops by itself. The thread will be knotted at the beginning and the end. To sew a second crocodile, release the foot control, then depress it again. Another crocodile will be sewn automatically. Separate the crocodiles by clipping the connecting threads. The curved scissors included in your accessory box are convenient here, for they allow you to scoop up the thread and cut it close to the stitching.

* The patterns shown below are automatically locked at the beginning and end of the pattern.

71 72 73 74 75 76 77 78 79

* To make a string of crocodiles, place in memory.

To Reduce the Patterns

To sew a penguin, for example, select pattern 71.

- The pattern is reduced in size each time you press the key. (The size is indicated under the selected pattern.)

Patterns 61 to 89 are reducible.

* Locking stitches are not automatically sewn after patterns 61 to 69 and 81 to 89. You may want to memorize a locking stitch after these patterns.
You'll love the beautiful designs you can sew with this craft stitch pattern, and in half the time it would take if embroidered by hand. Cross stitches can be effectively combined with the alphabet and other craft patterns for attractive samples and other sewing projects. Counted cross stitch pamphlets for hand work are excellent design sources.

A plain close weave such as linen or wool flannel make the best background fabric. Support lightweight fabrics with a stabilizer backing. This pattern can be reduced in size by pressing the \text{ }\text{ }\text{ } key.

The sand stitch fills outlined designs. Sew in rows starting at the edge. Manually decrease the stitch width to fill in small spaces.

The sculpture stitch adds a three dimensional effect when outlining designs for elegant motifs on clothing, table linens and crafts.

The sculptured look is formed by five back and forth stitches and one forward stitch.

Trace your design on the right side of the fabric. Place a stabilizer backing underneath for extra support on lightweight fabrics.

Stitch slowly by guiding foot F over the traced line, pivoting at corners.

Secure the threads with the locking stitch.
Shading Stitches

Select pattern \( \frac{1}{2} \) or \( \frac{1}{4} \).

- Pressure dial

2 or 1

Patterns \( \frac{1}{2} \) and \( \frac{1}{4} \) can be used for quick and neat outline designs. Use them to enhance appliques and create your own machine embroidered motifs.

Draw the design on the right side of the fabric. Place a stabilizer backing or iron-on interfacing beneath the fabric for support where necessary.

Use the automatic setting or manually adjust the stitch length and width to achieve the desired effect. Reduce the pressure to facilitate sewing curved areas. You may need to pivot on sharp curves.

A second row in the same or varied thread color can be sewn inside the first row for a more pronounced outline.

Smocking

Select pattern \( \frac{1}{3} \).

- Patterns \( \frac{1}{4} \), \( \frac{2}{8} \), \( \frac{3}{16} \), \( \frac{5}{31} \), \( \frac{1}{2} \), or \( \frac{5}{16} \) can also be used.

For a delicate, decorative treatment, smocking can be applied whenever gathers are used. Turn a child's dress into something very special or smock a yoke on a blouse. Choose a soft, lightweight fabric such as batiste, gingham or challis.

Cut the fabric three times the finished width.

With the manual stitch length at 3.0 to 4.0 sew straight lines 1 cm (3/8") apart, across the area to be smocked. A looser needle thread tension will make gathering easier. Knot the threads along one edge. Pull the bobbin threads and distribute the gathers evenly. Secure the threads at the other end.

Reduce the tension and pressure if necessary and sew pattern stitches between the straight seams.

Pull out the gathering stitches.
SECTION IV

Twin Needle Stitching

This machine is equipped with a twin needle that can be used to sew parallel rows straight or decorative stitches adding an exquisite touch to table linens and clothing.

Select pattern

- Stitch width
- Needle
- Patterns can also be used.

* The machine has two accessory spool pin holes and comes with a detachable spool pin.

* Turn off the power switch before changing the needle.
* Insert an additional spool pin, and put the felt and spool on it.
* Do not set the stitch width adjusting key to more than 3.0.

Threading from ① to ④ is the same as for single thread (see page 8).

⑤ Draw the threads down and slide them through the right side of the lower thread guide.
⑥ Slide one of the threads through the needle bar thread guide on the left, and the other one on the right.
⑦ Thread the needles from front to back.

* The needle threader cannot be used with twin needles.
Sewing Built-in Letters and Numbers (Not Using a Memory Card)

- To Select Patterns:
  - (Select the alphabet mode key.)
  - Press the or keys. Four kinds of letter styles appear on the screen.

1. Alphabet (Block style)
2. Alphabet (Script style)
3. European letter (Block style)
4. European letter (Script style)

- Letter Styles and Operation Key
  - Key for changing the overall size of letters and numbers (from standard to approximately 2/3 size). (See page 63.)
  - Upper/lowercase selection key (alternately selects uppercase or lowercase each time pressed). (See page 62.)
  - Key for combining letters with decorative patterns (see page 52.)

- Combining Letters in Block Style

1. A
2. M
3. M
4. N
5. M
6. M
7. M
8. M
9. A
10. M
11. M
12. M
13. M

ANIMAL—ANIMAL

ANIMAL

ANIMAL

ANIMA

ANIMAL

ANIMAL

ANIMAL

ANIMAL

ANIMAL

ANIMAL

ANIMAL

ANIMAL

ANIMAL
**Combining Letters in Script Style**

1. A
2. M
3. M
4. M
5. M
6. M
7. M
8. M
9. M
10. M
11. M
12. M

**Combining European Letters in Block Style (Lowercase)**

1. Z
2. A
3. A
4. M
5. M
6. M
7. M
8. M
9. M
10. M
11. M
12. M

- Press this key twice.
- Press this key twice.
Combining Letters and Space

Step | Visual Touch Screen | Sewing Sample
--- | --- | ---
1. | P | P. □ S_
2. | M | P. □ S_
3. | P | P. □ S_
4. | M | M | P. □ S_
5. | P | P. □ S_
6. | M | M | P. □ S_
7. | M | M | P. □ S_
8. | M | M | P. □ S_
9. | M | M | P. □ S_
10. | M | M | P. □ S_
11. | M | M | P. □ S_
12. | M | M | P. □ S_
13. | M | M | P. □ S_
14. | M | M | P. □ S_
15. | M | M | P. □ S_
16. | M | M | P. □ S_
17. | M | M | P. □ S_
18. | M | M | P. □ S_

* Make a space.

Press once □ (5 mm)
Press twice □ (4 mm)
Press 3 times □ (3 mm)
Press 4 times □ (2 mm)

* If you wish to adjust the size of the space, this can be done by pressing the space key.
**Store Key**

To store the word "ANIMAL" for example:

1. Memorize the word "ANIMAL" (see page 62).
2. Press the store key [M].
3. Press the number of the location that you want to store in, then press the store key.

The visual touch screen will show "REGISTERED" for 2 seconds, then it will show the memorized word "ANIMAL". The word is now stored. The screen changes as below:

**Recall Key**

To recall the word "ANIMAL" stored in location number 1:

1. Press the recall key [M].
2. Press the 1 key, then press the recall key.
   - "•" shows that the word is stored.

The visual touch screen will show the stored word after 2 seconds.

The patterns registered with the [M] key are stored for about 3 weeks with the power switched off.

If you store a new pattern/character combination to a currently occupied memory location, the old combination will be erased.
Notes on Programming (In Ordinary Sewing Mode)

1. Prior to programming, delete the previously programmed patterns by pressing the clear key.
   For a long program, it is advisable to write down the programming procedure in order to avoid an error.

2. Up to 50 patterns or letters/numbers can be programmed in the memory. Note, however, that the straight, buttonhole and other utility stitch patterns cannot be memorized.

3. If you find that a wrong pattern is selected and memorized in the middle of programming, press the clear key. The pattern alone will then be cleared.

4. After sewing a lowercase `&` or `.` (period), insert a space for best results.

5. If a program has not been stored, it will be erased...
   - When the power switch is turned off.
   - If you have been sewing a programmed pattern and then you stop the machine. If you then press any pattern key or menu key.

6. If an incorrect operation is performed in programming, an electronic alarm will sound to signal an error.
Craft Patterns

* All patterns on the chart (except the "one point patterns," right) indicate the unit of each pattern sewn when the M key is pressed once.

* Each pattern includes the locking stitch at the starting point. For locking at the end point, press the auto-lock button while sewing.

* Each pattern starts at the "-" indication.
Patchwork/Quilting

- **Patchwork Key**
  Select stitch patterns 151 to 153 by pressing this key.

- **Repeat Sewing Key**
  The same length of stitches can be sewn repeatedly by pressing this key.

1. Select stitch pattern 151, 152 or 153.
2. Press the **Repeat Sewing** key.
3. Press the memory start [MS] key.
4. Start sewing at (A) (see illustration) and press the reverse button at (B). (When using stitch pattern 151 plain straight stitch, instead of pressing the reverse button at point (B), press the start/stop button.)
5. Press the memory end [ME] key after the machine stops automatically.

* To memorize a new length seam, press [MS] again and start sewing (the previously memorized seam length will be erased).
* Press the key after sewing.
- Quilting Key
Select stitch patterns 154 to 158.

To sew:
Attach the walking foot.

○ Patterns 154 to 158 can be used for outline quilting or stitch in the ditch quilting.

* See page 20 for how to attach the walking foot.

- Freehand Quilting Key
Select stitch pattern 159.

To sew:
Attach the darning foot P2.

* The feed dog lowers automatically when the key is pressed.
(The carriage will move, so make sure nothing is blocking it.)

○ Guide the fabric by hand.

* See page 73 for how to attach the darning foot.

* Mark fabric with desired design using a water soluble pen.

* To begin sewing, lower foot onto fabric, press the up/down needle button to bring bobbin thread to top of fabric.
Knot together when completed.

or
Straight stitch in place 3 times to knot threads.
SECTION VI

• Pattern Calculation Key

The size and number of each piece of fabric can be calculated automatically. (There are 6 different designs.)

To calculate (inch indication)

Example: When the key is pressed.

To calculate (centimeter indication)

See page 15 for how to change the measurement indication between centimeters and inches.

Steps:

① Set the size of work by pressing the or key.

Nine Patch ............... 5 cm to 100 cm
Mosaic, Lemon Star,
Grandma Garden ........... 8 cm to 100 cm
Log Cabin ............... 11 cm to 100 cm
Baby Blocks .............. 9 cm to 100 cm

② Press the key, and select the number of rows by pressing the or key.

③ Press the key.

④ The size (seam allowance of 0.7 cm included) and required number of pieces are indicated. The recommended colors are also indicated.

⑤ Press the key after checking.
• To Use the Patchwork Foot 0

Sew guiding the edge of fabric along the guide of foot.

* A seam allowance of 0.7 cm is created by guiding the edge of fabric along the guide.

• Angle Scale on Needle Plate

You can sew without marking by matching the edge of fabric to the angle scale on the needle plate at the beginning.

• Recommended Fabric, Needle, Thread and Pressure for Patchwork, Quilting and Freehand Quilting

<table>
<thead>
<tr>
<th></th>
<th>Patchwork</th>
<th>Quilting</th>
<th>Freehand Quilting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needle Size</td>
<td>#11</td>
<td>#11</td>
<td>#11</td>
</tr>
<tr>
<td>Needle Thread</td>
<td>#60</td>
<td>Transparent</td>
<td>Transparent</td>
</tr>
<tr>
<td>Bobbin Thread</td>
<td>#60</td>
<td>#60 to #90</td>
<td>#60 to #90</td>
</tr>
<tr>
<td>Pressure Dial</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Fabric</td>
<td>Broadcloth Sheetng</td>
<td>Broadcloth Sheetng</td>
<td>Broadcloth Satin Sheeting Wool Velveteen</td>
</tr>
</tbody>
</table>

**PATCHWORK CONVERSION CHART**

To convert from thirty-seconds of an inch to more reasonable increments use the following table.

<table>
<thead>
<tr>
<th>INCHES USE 1/8” MEASUREMENT FOR THE FOLLOWING</th>
<th>SIZE CALCULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/32”</td>
<td>2/32”</td>
</tr>
<tr>
<td>2/32”</td>
<td>3/32”</td>
</tr>
<tr>
<td>3/32”</td>
<td>4/32”</td>
</tr>
<tr>
<td>(1/8”)</td>
<td>5/32”</td>
</tr>
<tr>
<td>USE 1/4” MEASUREMENT FOR THE FOLLOWING</td>
<td>6/32”</td>
</tr>
<tr>
<td>6/32”</td>
<td>7/32”</td>
</tr>
<tr>
<td>(1/4”)</td>
<td>8/32”</td>
</tr>
<tr>
<td>USE 3/8” MEASUREMENT FOR THE FOLLOWING</td>
<td>9/32”</td>
</tr>
<tr>
<td>9/32”</td>
<td>10/32”</td>
</tr>
<tr>
<td>(3/8”)</td>
<td>11/32”</td>
</tr>
<tr>
<td>USE 1/2” MEASUREMENT FOR THE FOLLOWING</td>
<td>12/32”</td>
</tr>
<tr>
<td>12/32”</td>
<td>13/32”</td>
</tr>
<tr>
<td>(1/2”)</td>
<td>14/32”</td>
</tr>
<tr>
<td>INCHES USE 5/8” MEASUREMENT FOR THE FOLLOWING</td>
<td>SIZE CALCULATION</td>
</tr>
<tr>
<td>15/32”</td>
<td>16/32”</td>
</tr>
<tr>
<td>16/32”</td>
<td>17/32”</td>
</tr>
<tr>
<td>(5/8”)</td>
<td>18/32”</td>
</tr>
<tr>
<td>USE 3/4” MEASUREMENT FOR THE FOLLOWING</td>
<td>19/32”</td>
</tr>
<tr>
<td>19/32”</td>
<td>20/32”</td>
</tr>
<tr>
<td>(3/4”)</td>
<td>21/32”</td>
</tr>
<tr>
<td>USE 7/8” MEASUREMENT FOR THE FOLLOWING</td>
<td>22/32”</td>
</tr>
<tr>
<td>22/32”</td>
<td>23/32”</td>
</tr>
<tr>
<td>(7/8”)</td>
<td>24/32”</td>
</tr>
<tr>
<td>USE 1” MEASUREMENT FOR THE FOLLOWING</td>
<td>25/32”</td>
</tr>
<tr>
<td>25/32”</td>
<td>26/32”</td>
</tr>
<tr>
<td>(1”)</td>
<td>27/32”</td>
</tr>
</tbody>
</table>

71
Adjusting Patterns

If decorative stitch patterns, letters, numbers or manual buttonhole stitch are uneven when you sew on a particular fabric, adjust them with the feed balancing dial.

- To Adjust Automatic Buttonhole Stitch Balance
  Stitches on each side of the buttonhole should be the same stitch density. If not, adjust as follows:
  
  1. Use foot R.
  2. If the stitches on the left hand side are too far apart, turn the feed balancing dial towards the "+" sign.
  3. If the stitches on the right hand side are too far apart, turn the feed balancing dial toward the "−" sign.

- To Adjust Distorted Patterns
  If patterns are uneven when sewing with a particular fabric, adjust them by turning the feed balancing dial with a coin.

  When patterns are compressed, correct by turning the dial in the direction of "+".
  When patterns are drawn out, correct by turning the dial in the direction of "−".

- To Adjust Distorted Letters or Numbers
  If letters or numbers are uneven when sewn on a particular fabric, select pattern 8 to test the stitch then turn the feed balancing dial with a coin.

  When the letters or numbers intersect, turn the dial to "+".
  When the letters or numbers are drawn out, turn the dial to "−".

72
Freehand Embroidery

- To Attach the Darning Foot

1. Remove the foot holder.
   - Raise the presser foot.
   - Remove the foot holder by loosening the thumb screw.

2. Attach the darning foot.
   - Attach the darning foot to the presser bar putting the pin on the needle clamp.
   - Tighten the thumb screw firmly with a large screw driver.

3. Threading
   - Put some fabric under the foot and press the up/down needle button to bring the needle thread down through the hole in the foot. Pull the thread to the rear and under the foot together with the bobbin thread.

- To Sew

   Select pattern
   
   Lower the feed dog.
   
   Embroidery foot P
   
   or
   
   Darning foot P2

   Draw the pattern on the fabric with a pencil or tailor's chalk.
   
   Set the fabric in the embroidery hoop.
   
   After lowering the feed dog and pressing the start/stop button or pressing the foot control, the OK Sensor screen will appear. Check the instructions, then press to proceed.
   
   Set the speed setting lever to "Low" and sew along the lines of your design by moving the hoop with your hand.

* By changing the stitch width, you can vary the look of the embroidery.
* Raise the feed dog after sewing.
SECTION VII

PROFESSIONAL STYLE EMBROIDERY

Getting Ready to Sew Professional Style Embroidery

- Interfacing

Interfacing material for embroidery is available in adhesive type (with an iron) and non-adhesive type.

Interfacing should be attached to the wrong side of fabric. More than one layer may be required.

The non-adhesive type should be used when embroidering fabric which cannot be ironed or sections which are difficult to iron. For both types, cut the interfacing larger than the embroidery frame and set it on the frame so that the entire piece is fastened with the frame to prevent looseness of the fabric.

- Selecting Needle and Thread

<table>
<thead>
<tr>
<th>WEIGHT OF FABRIC</th>
<th>TYPE OF THREAD</th>
<th>TYPE OF NEEDLE</th>
<th>NEEDLE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Medium</td>
<td>Size 50 Machine Embroidery Thread</td>
<td>Universal Ball Point</td>
<td>11 (75)</td>
</tr>
<tr>
<td></td>
<td>(Janome Embroidery Thread)</td>
<td>Blue Tipped Needle</td>
<td></td>
</tr>
<tr>
<td>Heavy</td>
<td>Size 50 to 100 Synthetic</td>
<td>Universal</td>
<td>14 (90)</td>
</tr>
</tbody>
</table>

* For embroidery sewing, we recommend Janome embroidery bobbin thread.

- Selection of Interfacing

To obtain perfectly formed letters, it is important to use the correct interfacing:

* Adhesive type ............ Use for stretch fabric (such as knit), thin (iron-on) fabric and shrinkable fabric.

* Non-adhesive type .......... Used for firm fabrics and fabrics which cannot be ironed.

- Template
• To Insert and Eject the Memory Card

**<To Insert>**

1. Turn off the power switch.
2. Insert the card making sure that the arrow on the label is in front of you.
3. Push the card straight in until the red mark on the eject button appears and it clicks. (Refer to the illustration above, right.)
4. Turn on the power switch. The menu screen appears for a few seconds, then the display changes and the machine is set for straight stitch.

* In embroidery mode, the foot control cannot be used. Use the start/stop button.

**<To Eject>**

1. Turn off the power switch.
2. Upon pressing the card eject button, the memory card comes out halfway and can be taken out.

**No memory card is inserted**

- The eject button is not sticking out.

**Memory card is correctly inserted**

- Memory card sticks out about 0.2 cm (1/8").
- The eject button sticks out and the red mark can be seen.

**Memory card is incorrectly inserted**

- If the eject button is not sticking out, the memory card is not pushed in far enough.

* The card should be ejected with the power switch turned off.
• How to Use Normal Embroidery Mode and Edit Design Mode

(Memory Cards made for Memory Craft 8000 may be used in Normal Embroidery Mode.)
Example: When standard Memory Card 101 is used

① When the normal embroidery mode key is pressed.

Letter styles and the border patterns may be selected.

* The screen will return to the first menu by pressing the key.

○ The carriage shifts in order of ① to ③ to lower the feed dog.

* The carriage will move, so make sure nothing is blocking it.
* Before turning off the power switch and covering the machine, be sure to return to the first menu, returning the carriage to its original position.
* Avoid turning the handwheel by hand while the carriage is moving.
* See page 93 for edit design.
• To Attach Embroidery Foot P

1. Raise the presser foot lifter, loosen the screw and remove the foot holder (see page 20).

2. Attach embroidery foot P and securely tighten the screw with the screwdriver.

• Threading the Machine

For threading, refer to the description of ordinary sewing (see page 8).

Pass the needle thread through the hole in the embroidery foot P in the downward direction, and guide the thread around the thread holder from the front side. (Leave 2 to 3 cm [1"] hanging.)

• Extension Table

Use the extension table while embroidering (see page 2).
To Set the Fabric in the Embroidery Hoop

1. First, mark the embroidering position on the fabric with tailor's chalk.

2. Second, loosen the hoop tightening screw on the outer hoop, lay the fabric on the outer hoop, and then press the fabric down with the inner hoop.

3. Third, tighten the hoop screw with your fingers.

* When placing the fabric on the embroidery hoop, place the outer hoop on a flat surface.
* For thin and stretchy fabrics, refer to page 74.
4) Put the template on the fabric, and match the reference lines on the template and fabric. (When using standard Memory Card 101.)

* If the initial needle position is not directly over the starting point marked on your fabric, press the key, then use the arrow keys to move the carriage until they are aligned.

* See page 90 for how to match the reference lines on the template with the position of the design.

* The inner hoop should be set into the outer hoop with marks L and R upward on the tightening screw side.

5) Press them all into the outer hoop taking care that the reference lines on the fabric and template do not move away from each other.

6) Take out the template by putting your finger in the thumb hole.

- To Attach the Embroidery Hoop to the Machine

1) Turn the key so it is parallel with the hoop, and set it on the carriage.

2) Attach the outer hoop by fitting the prong into the carriage, and turn the key clockwise.
Normal Embroidery with Standard Memory Card 101

- To Select Letter Style

(Menu screen)

- When the \[\text{ABCabc}\] key is pressed (there are 2 displays),
  1 Alphabet (block style) can be selected.

- When the \[\text{ABCæéêæéê}\] key is pressed (there are 2 displays),
  1 Alphabet (script style) can be selected.

- When the \[\text{<ABC>}\] key is pressed (there are 3 displays),
  1 The first letter of a three-letter monogram and the border design can be selected.

- When the \[\text{<ABC>}\] key is pressed (there is 1 display),
  1 A border pattern can be selected.

- When the \[\text{<ABC>}\] key is pressed (there are 2 displays),
  1 Alphabet (block style) can be selected.

0 European letters (block style) can be selected.

0 European letters (script style) can be selected.

0 The second letter can be selected.

0 The last letter can be selected.

* Change the display by pressing the \[\text{위}\] or \[\text{위}\] key.
* The number next to the symbol indicates which number embroidery frame may be used. (Embroidery hoop No. 3 is optional.)
* Press the \[\text{위}\] key to return the screen to the first menu.
* The \[\text{위}\] means that embroidery foot P should be used.
- Function Keys

**M**
For memorization of the pattern (see page 53).

**C**
For clearing (see page 53).

**M_s**
For changing the overall size of letters and numbers (press to rotate between sizes).

**M_r**
For storing the pattern (see page 65).

**M_r**
For recalling the stored pattern (see page 65).

**C**
For adjusting the thread tension by hand (see page 18).

**Up and Down Arrow**
For checking the sewing position of pattern (see page 84).

**Left and Right Arrow**
For changing the needle thread color (see page 83).

**A/a**
Uppercase/lowercase selection keys (press to alternate between upper- and lowercase).
**SECTION VIII**

### Block-Style Letters

<table>
<thead>
<tr>
<th>Step</th>
<th>Visual Touch Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Y2O</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
</tr>
<tr>
<td>3</td>
<td>MNQ</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
</tr>
<tr>
<td>5</td>
<td>MNQ</td>
</tr>
</tbody>
</table>

"O" can be selected by pressing this key 3 times.

---

### To Sew

1. Lower the presser foot, press the start/stop button and sew 5 or 6 stitches. Then, press the start/stop button again to stop the machine.
2. Raise the presser foot, cut off extra thread at the starting point close to the beginning and lower the presser foot.
3. Be sure to cut off the extra thread when you start sewing in the embroidery mode.
4. Press the start/stop button again. When sewing is started, the word "YMO" shifts on the visual touch screen. When sewing is completed, the original display returns and at the same time, an electronic sound is emitted to signal completion of sewing.

---

**Sewing Sample**

\[ YMO \rightarrow YMO \]

* Connecting thread
* Cut the connecting thread.
To Use Color Select Key

(Steps)

1. Program the letters "YMO".

2. Press the key.

3. Start sewing by pressing the start/stop button.

4. The machine stops automatically after each letter is sewn. Replace the thread with a different colored one.

How to Use the Beginning Key

If you run out of thread in the middle of sewing a word (or some other pattern), and you want to start sewing again from the beginning, press the beginning button.

How to Use the Frame Key

Use to move the hoop backward and forward.

- Frame Return Key
  This key is used to resume sewing where the thread has been broken. By pressing this key, you can move the hoop to the point where the thread broke.
  * The hoop is moved backward 10 stitches each time the key is pressed.

- Frame Advance Key
  Pressing this key moves the hoop forward without sewing. The key is used for correction when the hoop is returned too far.
  * The hoop is moved forward 10 stitches each time the key is pressed.
To Sew a Second Row of Letters/Numbers

Space check key

1. Upon pressing the \[ \text{key} \], the original monogram positioning and range are displayed. * For moving the pattern on the template display

- Press the grid key \[ \text{key} \].

2. Move the embroidery hoop to the desired starting position by pressing the direction keys \[ \text{key} \].

(Press the \[ \text{key} \] after setting.)

3. Press the start/stop button to start sewing.

* For hoop movement range, refer to page 83.
- Block-Style Letters (Large Size)

1. Step
   Visual Touch Screen

2.  
   Y O

3.  
   M

4.  
   M N O

5.  
   M

6.  
   M N O

7.  
   M

- European Letters in Block Style (Lowercase)

1. Step
   Visual Touch Screen

2. A
   a

3.  
   M

4.  
   É

5.  
   É É i

6.  
   M

7.  
   É

8.  
   M K L

9.  
   M

10.  
    M N O

11.  
    M

YMO

zélo
### Script-Style Letters (Large)

<table>
<thead>
<tr>
<th>Step</th>
<th>Visual Touch Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A</td>
<td>ABC</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>M</td>
</tr>
<tr>
<td>5 B</td>
<td>ABC</td>
</tr>
<tr>
<td>6</td>
<td>M</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>M</td>
</tr>
</tbody>
</table>

### Border Patterns

<table>
<thead>
<tr>
<th>Step</th>
<th>Visual Touch Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>M</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>M</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>M</td>
</tr>
</tbody>
</table>

Sewing Sample

A.B.
• Three-Letter Monogram

Step

1. 

2. M

3. A

4. M

5. B

6. A

7. M

8. C

9. A

10. M

Visual Touch Screen

* To sew a monogram inside a border (\[\square\], \[\bigcirc\], \[\bigcirc\], \[<>\]), memorize a border pattern first (as above), then the letters (see page 80).

(Also when sewing a two-letter monogram.)

* The "<>" mark indicates which letter (left, middle, right) can now be memorized.

• Two-Letter Monogram

Step

1. 

2. M

3. A

4. M

5. B

6. A

7. M

Visual Touch Screen

<AB>
• **Notes on Programming (In Embroidery Mode)**

1. Prior to programming, delete the previously programmed letters by pressing the clear key. For a long program, it is advisable to write down the programming procedure in order to avoid an error.

   * An electronic alarm will sound when the memory is full.

2. If you accidentally select an incorrect pattern/letter/number, press the clear key. The pattern alone will be cleared.

3. If an incorrect operation is performed in programming, an electronic alarm will sound.

4. In the following cases, the entire program is cleared.
   - When the power switch is turned off.
   - If you have been sewing a programmed pattern and then you stop the machine, if you then press the clear key, return key or any pattern key.

---

• **To Adjust the Thread Tension**

   If the bobbin thread appears on the upper surface of the fabric,

   1. Press the thread tension key.
   2. Decrease by pressing the key.
Normal Embroidery with Memory Card 102

- To Select the Pattern
  1. Insert Memory Card 102 (see page 75).
  2. Press the normal embroidery mode key.

MODE SELECTION KEYS

- Press R to move to next screen.

1. Patterns 1 to 16
2. Patterns 17 to 32
3. Patterns 33 to 48

4. The screen will return to the former display by pressing the R key, and the menu by pressing the MENU key.

5. Press the pattern on the screen to select it. Example:

   SELECTED PATTERN

6. The color of thread and sewing procedure are indicated.
   - SOLID The number shown under the thread color is the color code of Janome embroidery thread.
   - MIXED The number next to the symbol display indicates which number embroidery hoop may be used.
To Sew the Pattern (Example: Pattern 2)

1. Mark the fabric with reference lines, match them with those on the template, and set the fabric in the embroidery hoop. Then, attach the hoop to the carriage.

2. If the initial needle position is not directly over the starting point marked on your fabric, press the key, then use the arrow keys to move the carriage until they are aligned.

3. Upon pressing the start/stop button, the machine sews the pattern in step 1 and stops automatically.
   * When starting sewing, sew 5 or 6 stitches and cut the thread tail.
   * When finished sewing, cut the thread tail at the end point.
   * When doing multi-color embroidery, cut the connecting thread each time you change colors.

4. Replace the thread and sew the pattern in step 2. After sewing the pattern, the machine stops automatically.

5. In the same way, replace the thread and sew the pattern in step 3. After sewing the pattern, the machine stops automatically.

   Cut the connecting threads on the right side of the fabric after finishing sewing.

   * Cut the connecting threads on the wrong side of the fabric, (leave about 5 mm).
• **Skipping (Use to sew only part of a design.)**

**Example: Design 2**

1. Select design 2.
2. To sew only the third part of the design, press the key previous to it (②).

Sewing sample of 3rd pattern

③ Start sewing.
If the Thread Breaks While Embroidering

The following message is displayed on the visual touch screen.

- **OK Sensor**
  - If the OK Sensor appears on the screen after starting sewing, check the items listed, then press the key and continue sewing.

(Displayed when embroidering)

(Displayed in normal sewing mode)

- If the machine is stopped by pressing the start/stop button.
  - Follow the instructions above ("If the thread breaks...").
  - If you're not sure where the sewing ended, return the hoop to the starting point by pressing the beginning key, then start sewing again.
**EDIT EMBROIDERY**

**SECTION IX**

**Edit Design**  (Use the standard embroidery hoop No. 1 or the round embroidery hoop No. 3 [optional] in edit design mode.)

- To combine the designs contained in one or more cards, press the edit design mode key.

- **Combining the Designs in One Memory Card (Memory Card 101)**
  
  Example: Block style letters and border patterns

1. Memorize "Be-B" in block style.
2. Press the edit key.

3. Shift the pattern to the appropriate position by pressing the keys.
4. Press .
   
   - If you make a mistake or want to start over, you can clear the screen with the key.

- The appropriate hoops appear on the screen for a few seconds, then the pattern selection screen comes up.

---

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5) Start sewing.
   * Press the key after finishing sewing.

6) Memorize the border patterns , , and .
7) Press the key.

8) Shift the pattern to the appropriate position to combine with the pattern previously sewn by pressing the key.
9) Press .

10) Start sewing.
How to Center a Design  

Example: Sewing letters in standard Memory Card 101

* To center an embroidered design on a garment, first memorize pattern 47 "+" from Memory Card 102. This mark will then appear on the screen to help you center a design.

1. Mark the center on the fabric.
2. Set the fabric in the embroidery hoop and connect the hoop to the carriage.
3. Insert Memory Card 102, turn on the machine and select pattern 47.
4. Press the key.
5. Use the keys to move the carriage until the "+" mark on the fabric is directly under the needle.
6. Press the key. The machine will sew one stitch and stop automatically.
7. Turn off the power switch and insert Memory Card 101.

8. Memorize the word "POP" in script style and press the \[ \text{key} \].

9. Use the keys to move the rectangle on the screen so that the "+" is exactly in the center of it. Then press \[ \text{OK} \].

10. Press the start/stop button to start sewing.
Normal Embroidery with Large Pattern Memory Card  

Example: Memory Card 2

- To Select the Pattern

1. Insert memory card (see page 75).
   * Before insertion, turn off the power switch.

2. Press the normal embroidery key on the menu screen, patterns are indicated.

3. Select the pattern by pressing the display.
   Selected pattern

* The screen is changed each time the key is pressed.

* key is displayed only for the patterns which can be sewn in more than one color (see page 96).
**To Sew a Large Pattern (In Different Colors)**

1. Select 
2. Mark the fabric with reference lines, match them with those on the template, and set the fabric in the embroidery hoop. Then, attach the hoop to the carriage.
3. Press the key to see the suggested thread color and sewing sequence.

* Use of two additional spool pins is convenient for color changes.
* We recommend using the round embroidery hoop (optional).
4) Press the start/stop button. The machine sews the pattern in step 1 and stops automatically.

* When starting sewing, sew 5 or 6 stitches and cut the thread on the thread holder.
* When finished sewing, cut the thread at the end point.
* When doing multi-color embroidering, cut the connecting thread each time you change colors.

5) Replace the thread and sew the pattern in step 2. After sewing the pattern, the machine stops automatically.

6) Replace the thread and sew the pattern in step 3. After sewing the pattern, the machine stops automatically.

7) Cut the connecting thread.
SECTION X

- To Sew a Large Pattern (In a Single Color)

Example:  (emblem)

1. Select .

2. Press the start/stop button. The machine sews the selected pattern and stops automatically.
Embroidery with Blank Memory Card and Scan'n Sew (Optional Accessories)

1. Turn the power switch off and insert the card (see page 75).

2. Press the normal embroidery mode key on the menu screen.

3. Sew the pattern in the same way as for normal embroidery.
Care of Your Machine

The Memory Craft 9000 has been meticulously designed and manufactured to give you a lifetime of trouble-free sewing. The machine never needs oiling but the bobbin area and hook race should be cleaned after completion of every garment. Do not store the machine in a high-humidity area, near a heat radiator or in direct sunlight. Clean the outside of the machine with a soft cloth and neutral soap. Press the up/down needle button to raise the needle and unplug the machine before cleaning.

- Cleaning the Bobbin Holder

Loose threads and dust may cause puckered stitches and thread breakage during stitching. Check for lint build-up after each garment is completed.

Turn off the power switch or unplug the machine.

Remove the cover plate by sliding the hook cover plate release button to the right.

Take out the bobbin.

Brush out dust and lint. (You may also use a small vacuum cleaner.)

Insert the bobbin.

Attach the hook cover plate.

- Exposing the Hook Race

Unplug the machine and remove the presser foot and needle.

Remove the screw on the left side of the needle plate with the screwdriver supplied with the machine.

Remove the needle plate.

Take out the bobbin. Lift up the bobbin holder and remove it.
- **Cleaning the Hook Race**

  1. Clean the feed dogs, hook race and bobbin holder with the lint brush and a soft dry cloth.

- **Replacing the Bobbin Holder**

  1. Insert the bobbin holder so that the knob fits next to the stopper in the hook race.
  2. Raise the needle plate, inserting the two needle plate guide pins into the holes in the needle plate.
  3. Replace the screw.
### SECTION XI

**Troubleshooting**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Type of Sewing</th>
<th>Cause</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>The machine is noisy.</td>
<td>All</td>
<td>① Threads have been caught in the hook mechanism.</td>
<td>See pages 102 and 103</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② The feed dog is packed with lint.</td>
<td></td>
</tr>
<tr>
<td>The needle thread breaks.</td>
<td>All</td>
<td>① The needle thread is not threaded properly.</td>
<td>See page 8</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② The needle thread tension is too tight.</td>
<td>See page 18</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>③ The needle is bent or blunt.</td>
<td>See page 21</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>④ The needle is incorrectly inserted.</td>
<td>See page 21</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>⑤ The thread is too heavy for the needle.</td>
<td>See page 17</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>⑥ The needle thread and the bobbin thread are not set properly under (drawn to the rear of) the presser foot when sewing is starting.</td>
<td>See page 10</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td>⑦ The needle thread is not set in the thread holder when embroidery sewing is starting.</td>
<td>See page 77</td>
</tr>
<tr>
<td>The bobbin thread breaks.</td>
<td>All</td>
<td>① The bobbin thread is not threaded properly in the bobbin holder.</td>
<td>See page 7</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② Lint has collected in the bobbin holder.</td>
<td>See pages 102 and 103</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>③ The bobbin is damaged and doesn’t turn smoothly.</td>
<td>Replace bobbin.</td>
</tr>
<tr>
<td>The needle breaks.</td>
<td>All</td>
<td>① The needle is incorrectly inserted.</td>
<td>See page 21</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② The needle is bent or blunt.</td>
<td>See page 21</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>③ The needle clamp screw is loose.</td>
<td>See page 21</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>④ The tension of the needle thread is too tight.</td>
<td>See page 18</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>⑤ The fabric is not drawn to the rear when sewing is finished.</td>
<td>See page 13</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>⑥ The needle is too fine for the fabric being sewn.</td>
<td>See page 17</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual touch screen is not clear.</td>
<td>All</td>
<td>① The sharpness of visual touch screen is not adjusted properly.</td>
<td>See page 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Turn the knob to correct.</td>
</tr>
<tr>
<td>The embroidery key doesn’t work.</td>
<td>Embroidery</td>
<td>① The memory card is not inserted properly.</td>
<td>See page 75</td>
</tr>
<tr>
<td>Problem</td>
<td>Type of Sewing</td>
<td>Cause</td>
<td>Reference</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>-------</td>
<td>-----------</td>
</tr>
<tr>
<td>Skipped stitches.</td>
<td>All</td>
<td>① The needle is incorrectly inserted.&lt;br&gt;② The needle is bent or blunt.&lt;br&gt;③ The needle and/or threads are not suitable for the work being sewn.&lt;br&gt;④ A BLUE TIPPED needle is not being used for sewing stretch, very fine fabrics and synthetics.&lt;br&gt;⑤ The needle thread is not threaded properly.&lt;br&gt;⑥ The wrong needle is used.&lt;br&gt;⑦ The presser foot pressure is not strong enough.&lt;br&gt;⑧ The embroidery hoop is not set properly.&lt;br&gt;⑨ The fabric is not tightly pulled on the embroidery hoop.&lt;br&gt;⑩ Interfacing is not being used with stretch or fine fabrics.</td>
<td>See page 21&lt;br&gt;See page 21&lt;br&gt;See page 17&lt;br&gt;See page 17&lt;br&gt;See page 8&lt;br&gt;Change the needle.&lt;br&gt;See page 19&lt;br&gt;See page 79&lt;br&gt;See pages 78 and 79&lt;br&gt;See pages 26, 29 and 74</td>
</tr>
<tr>
<td>Seam puckering.</td>
<td>All</td>
<td>① The needle thread tension is too tight.&lt;br&gt;② The needle thread or the bobbin thread is not threaded correctly.&lt;br&gt;③ The needle is too heavy for the fabric being sewn.&lt;br&gt;④ The stitch length is too long for the fabric.&lt;br&gt;⑤ The presser foot pressure is not correctly adjusted.&lt;br&gt;⑥ The fabric is not tightly pulled on the embroidery hoop.&lt;br&gt;⑦ Interfacing is not being used with stretch or fine fabrics.</td>
<td>See page 18&lt;br&gt;See pages 7 and 8&lt;br&gt;See page 17&lt;br&gt;Make the stitches denser.&lt;br&gt;See page 19&lt;br&gt;See pages 78 and 79&lt;br&gt;See pages 26, 29 and 74</td>
</tr>
<tr>
<td>Slipping fabric.</td>
<td>Normal</td>
<td>① The presser foot pressure is not correctly adjusted.&lt;br&gt;② The correct presser foot is not being used.</td>
<td>See page 19&lt;br&gt;See page 20</td>
</tr>
<tr>
<td>The cloth is not feeding smoothly.</td>
<td>Normal</td>
<td>① The feed dog is packed with lint.&lt;br&gt;② The presser foot pressure is too weak.&lt;br&gt;③ The stitches are too fine.&lt;br&gt;④ The fabric is not fed when sewing is starting.&lt;br&gt;⑤ The feed dog is lowered.&lt;br&gt;⑥ The correct presser foot is not used.</td>
<td>See pages 102 and 103&lt;br&gt;See page 19&lt;br&gt;Make the stitches coarser.&lt;br&gt;See page 14&lt;br&gt;See page 16&lt;br&gt;See page 20</td>
</tr>
<tr>
<td>Problem</td>
<td>Type of Sewing</td>
<td>Cause</td>
<td>Reference</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>The machine doesn’t run.</td>
<td>All</td>
<td>① The machine is not plugged in.</td>
<td>See page 4</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② A thread is caught in the hook race.</td>
<td>See page 102</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>③ The control circuit is not working correctly.</td>
<td>Turn off the machine and turn it on again.</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>④ The start/stop button is used for ordinary sewing with foot control plugged in.</td>
<td>Then set for desired pattern.</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>⑤ The needle has not been threaded.</td>
<td>See page 4</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>⑥ The foot control is plugged in when sewing embroidery.</td>
<td>See pages 8 and 92</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td></td>
<td>See page 75</td>
</tr>
<tr>
<td>Strange sound occurs when the machine is switched on.</td>
<td>All</td>
<td>① Something is caught between the carriage and the arm.</td>
<td>Remove the object.</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② The carriage is rubbing against something touching the machine.</td>
<td>See page 76</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>③ The power is turned off just as the carriage touches the feed dog lever.</td>
<td>Turn off the machine and move the carriage backward with your hand. Then turn it on again.</td>
</tr>
<tr>
<td>Patterns are distorted.</td>
<td>All</td>
<td>① The correct presser foot is not used.</td>
<td>Use the correct presser foot.</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② The needle thread tension is too tight.</td>
<td>See page 18</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>③ The stitch length is not suitable for the fabric being sewn.</td>
<td>See page 72</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>④ Feed balancing dial is not set properly.</td>
<td>See pages 26, 29 and 74</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td>⑤ Interfacing is not used for sewing stretch and very fine fabrics.</td>
<td>See page 79</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td>⑥ The embroidery hoop turn key is loose.</td>
<td>See page 76</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td>⑦ The carriage has bumped some articles around the machine.</td>
<td>See pages 78 and 79</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td>⑧ The fabric is not pulled tightly on the embroidery hoop.</td>
<td>Stop the machine and free the end of the fabric.</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td>⑨ The end of the fabric is caught or pulled for some reason when sewing embroidery.</td>
<td>Cut the extra needle thread on the wrong side of fabric.</td>
</tr>
<tr>
<td></td>
<td>Embroidery</td>
<td>⑩ The needle thread on the wrong side of fabric is not cut correctly.</td>
<td></td>
</tr>
<tr>
<td>The automatic buttonhole stitches are not balanced.</td>
<td>Normal</td>
<td>① The stitch length is not suitable for the fabric being sewn.</td>
<td>See page 31</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>② The feed balancing dial is not set properly.</td>
<td>See page 72</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>③ Interfacing is not used with stretch fabrics.</td>
<td>See page 29</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>④ The presser foot is not the correct one.</td>
<td>See pages 29 and 34</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>⑤ The machine setting is incorrect.</td>
<td></td>
</tr>
<tr>
<td>Pattern selection keys don’t work.</td>
<td>All</td>
<td>① The bobbin winder spindle is in the winding position.</td>
<td>See page 6</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>② The number of characters is beyond the capacity of memory.</td>
<td>See pages 66 and 88</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>③ The control circuit is not working correctly.</td>
<td>Turn off the machine and turn it on again.</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>④ Ordinary sewing or embroidery modes have not been selected properly.</td>
<td>Then set for desired pattern.</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td></td>
<td>See pages 11 and 76</td>
</tr>
</tbody>
</table>