# INSTRUCTION BOOK



# "IMPORTANT SAFETY INSTRUCTIONS"

"Your sewing machine is designed and constructed only for HOUSEHOLD use."

"Read all instruction 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 12.3 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 ("O") 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."
- "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 ("O") 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."
- 16. "Hold plug when rewinding into cord reel. Do not allow plug to whip when rewinding."

# "SAVE THESE INSTRUCTIONS"

#### IMPORTANT

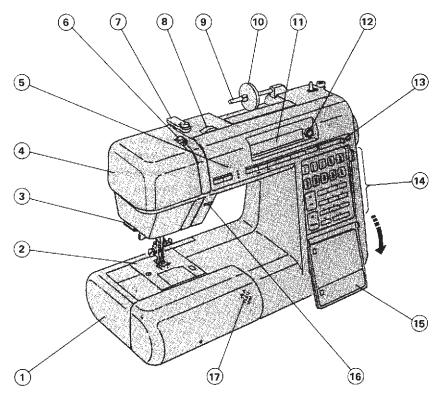
Be sure to keep machine away from static electricity, heat sources, humidity, and direct sunlight.

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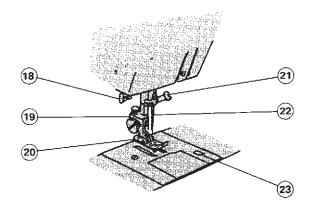
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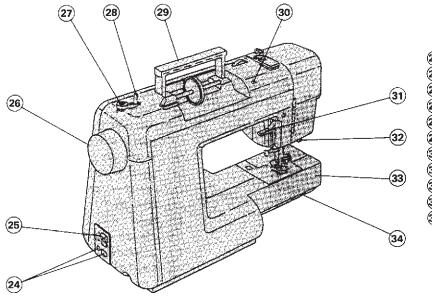
# Names of Parts



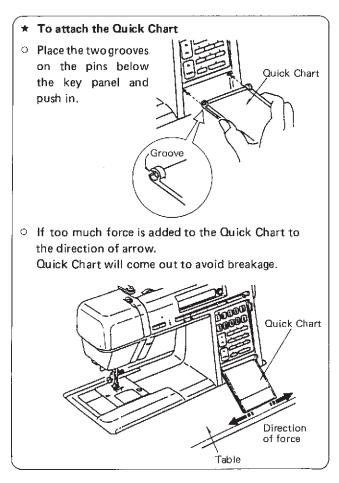
- Extension table (Accessory box)
- Needle plate
- <u>③</u> Thread cutter
- Face plate
- (4) (5) Auto-tension LED
- Thread take-up lever
- Upper thread guide
- Thread tension dial
- Spool pin
- 67890 Spool holder
- Liquid crystal display
- Screen sharpness adjusting knob
- Speed setting lever
- Key panel
- Quick chart
- 16 Reverse button
- Feed balancing dial

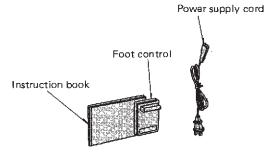


- Needle threader
- Foot holder
- Presser foot
- Needle clamp screw
- Needle
  - Hook cover plate release button

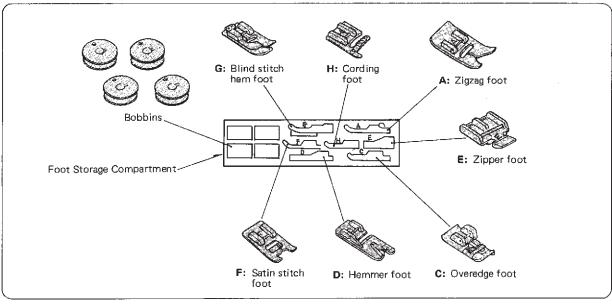


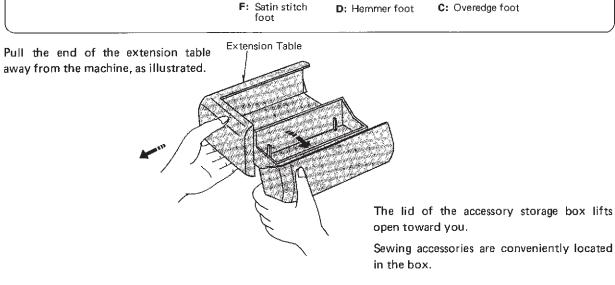
- (24) Machine sockets
- 25) Power switch
- 26) Balance wheel
- (27) Bobbin winder stopper
- (28) Bobbin winder spindle
- (29) Carrying handle
- 30 Hole for additional spool pin
- (31) Presser foot lifter
- 2 Buttonhole lever
- 33) Free arm
- Drop feed lever

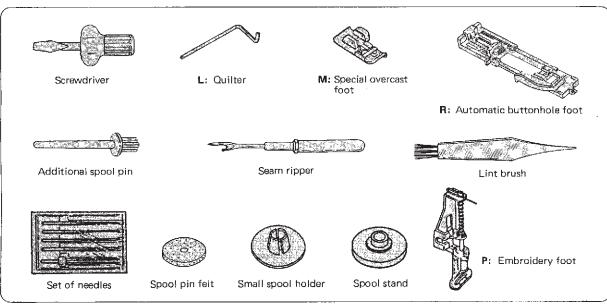




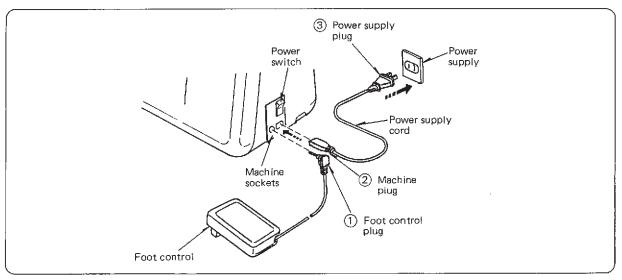
# Extension Table and Accessory Storage Box







#### 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.

- \* For use of the foot control

  Turn off the power switch, and insert the foot control plug ①, machine plug ② and power supply plug ③
  in this order.
- \* Turn the power switch on. The machine will be set for straight stitch.

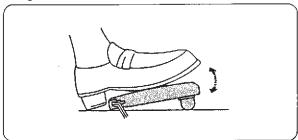
#### For Your Safety

- 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, balance wheel 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.
- Do not place anything on the foot control, except in use.

#### Controlling Sewing Speed

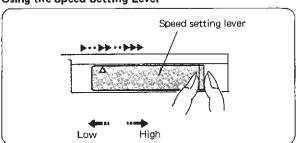
Sewing speed can be adjusted by using the foot control or the speed setting lever.

#### Using the Foot Control



Sewing speed can be varied by the foot control. The harder you press on the control, the faster the machine runs.

#### Using the Speed Setting Lever



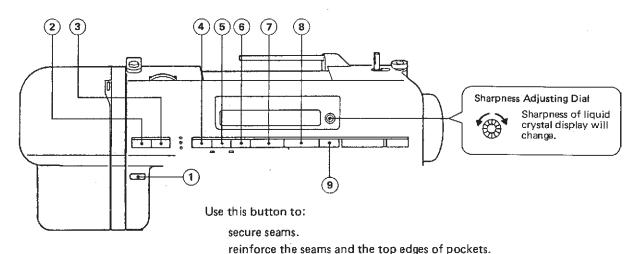
The maximum sewing speed can be controlled by the speed setting lever.

To increase the speed, slide the lever to the right (toward >>> ).

To decrease the speed, slide the lever to the left (toward 

).

#### Main Function of Buttons



(1) Reverse Button

During Straight Stitching Zigzag Stitching and Multiple Zigzag Stitching

Press and hold the reverse button.

The machine will sew in reverse until you release the button.

During Utility Stitch and Decorative Stitching:

Press the button and the machine will sew an auto-lock stitch and stop automatically.

(2) Auto-Lock Button

During Straight Stitching, Zigzag Stitching Stitching:



and Multiple Zigzag

The machine will take a few stitches in place and stop automatically.



During Utility Stitching and Decorative Stitching:

Press this button when running the machine, the machine will sew an autolock stitch at the end of pattern and stop automatically.

(3) Up/Down Needle Position Button

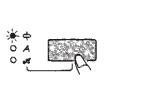


When you press this button, the needle will go up or down.

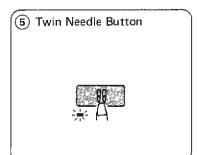
If the needle is up and you press this button, the needle will go down to its lowest position.

If the needle is down and you press this button, the needle will go to its highest position.

(4) Mode Button



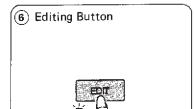
- O When you turn on the power switch, the LED will flash indicating utility
- By pressing the mode button the mode will change to block alphabet or script alphabet.



By pressing this button, the machine automatically sets the width for twin needle sewing.

Press button again to return to single needle sewing.

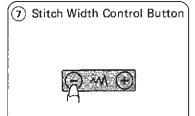
For detailed instructions, see p. 51.



Use this button to:

- check and correct pattern combinations before sewing.
- press again when editing is complete, the light will go out.

For edting, use the stitch length control button (see page 58).



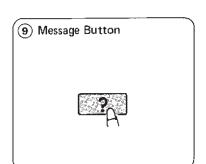
- o Stitch width and stitch length will be showing on the liquid crystal display.
- \* To decrease the stitch width, press the "-" button. The stitch width will decrease.

  To increase the stitch width, press the "+" button. The stitch width will increase.



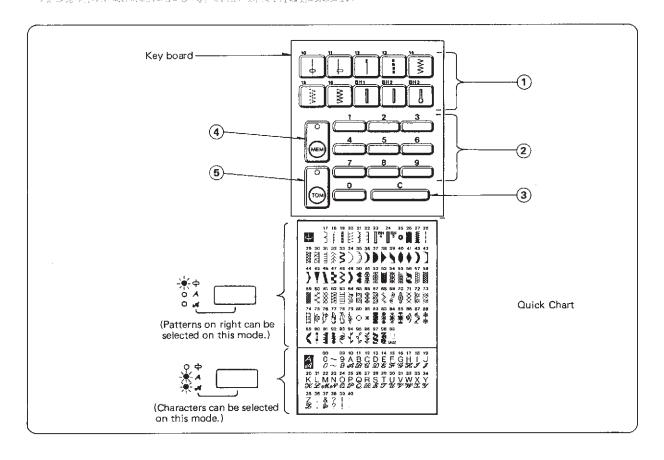
- Stitch width and stitch length will be showing on the liquid crystal display.
- \* To decrease the stitch length, press the "-" button. The stitch length will decrease.

  To increase the stitch length, press the "+" button. The stitch length will increase.

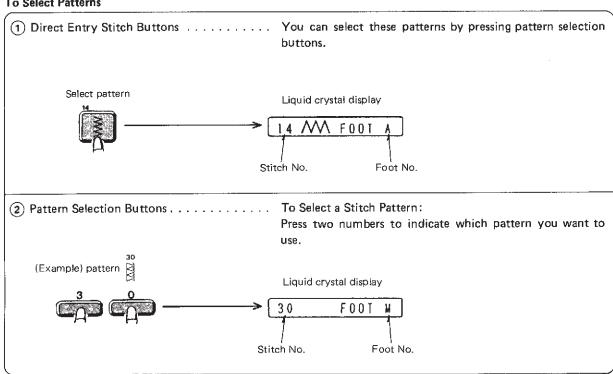


- o Sewing message will be shifted to left.
- \* Suitable presser foot, Thread tension, Pressure or special sewing method will be shown on the liquid crystal display. (see page 16).

#### To Select Patterns and Function of the Key Board

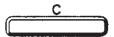


#### To Select Patterns



#### **Function of Button**

#### (3) Clear Button



The clear button works in two ways to clear a series of stitch patterns, depending on whether you have pressed the foot control.

1. Foot Control Not Pressed:

The clear button clears one stitch pattern at a time, beginning with the last selected and ending with the first selected.

This allows you to correct any mistakes made while programming a series of patterns. The clear button will delete all patterns at once if pressed after editing.

2. Foot Control Pressed:

The clear button deletes all stitch patterns in the series at once.

NOTE: Turning off the machine will clear the memory completely.

#### (4) Memory Button



The memory button, with its LED light, will "memorize" your pattern selection. Press the memory button after you select your stitch pattern. The LED light will go on to show that the machine has recorded your selection.

NOTE: If you are selecting a series of different stitch patterns, you must press the memory button after each selection.

The machine will remember them in order.

#### (5) Mirror Image Button

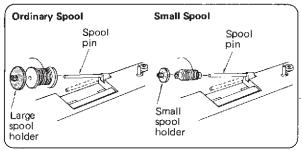


Use this button to:

- --- sew & memorize patterns in a mirror image.
- ---- sew & memorize letters and numbers in two thirds size.

#### Winding the Bobbin

#### · Set the Spool

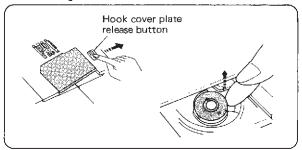


Lift up the spool pin. Place the spool of thread on the spool pin with the thread coming off the spool as shown.

Attach the large spool holder, and press it firmly against the spool of thread.

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

#### · Removing the Bobbin



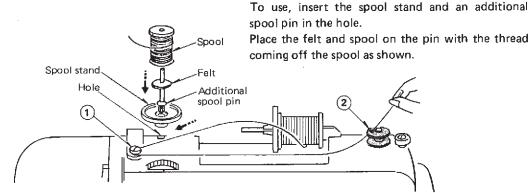
Gently slide the hook cover plate release button to the right, and remove the cover plate.

The additional spool pin is used to wind extra

bobbin without unthreading the machine.

Lift out the bobbin.

#### Winding the Bobbin

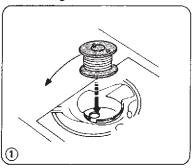


- Bobbin winder stopper
- (1) Guide the thread around the thread guide.
- (2) Thread through the hole in the bobbin from the inside to the outside.
- (3) Put the bobbin on the bobbin winder spindle, and push it to the right. With the free end of the thread held in your hand, depress the foot control. Stop the machine when it has made a few turns, and cut the thread close to the hole in the bobbin.

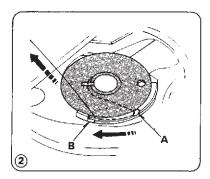


- Depress the foot control again. When the bobbin is fully wound, it will stop automatically.
- (5) Return the bobbin winder to its original position by moving the spindle to the left, and cut the thread as shown.

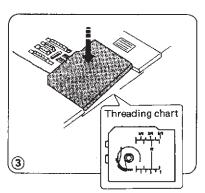
#### • Inserting the Bobbin



1 Place the bobbin in the bobbin holder with the thread running counterclockwise.



② Guide the thread into notch A on the front side of the bobbin holder.
Draw the thread to the left siding it between the tension spring blades.
Continue to draw the thread lightly until the thread slips into notch B.
Pull out about 15 cm (6") of thread.



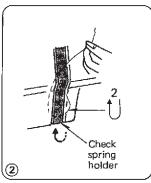
3 Attach the hook cover plate.
Check the threading by referring to the chart shown on the hook cover plate.

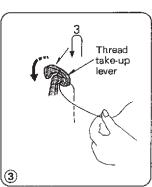
#### Threading the Machine

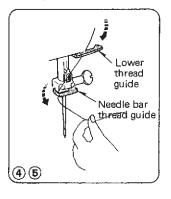
#### Raise the presser foot lifter.

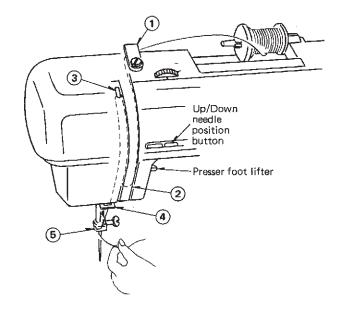
Press the Up/Down needle position button twice to raise the needle.





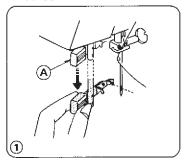




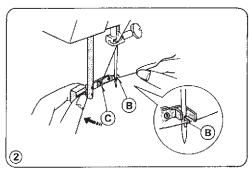


- (1) Draw the thread around the upper thread guide.
- (2) Then down around the check spring holder.
- 3 Firmly draw the thread from right to left over the take-up lever and down into the take-up lever eye.
- (4) Then down through the lower thread guide.
- Slide the thread behind the needle bar thread guide on the left.
  Thread the needle from front to back or use the needle threader. (See page 14.)

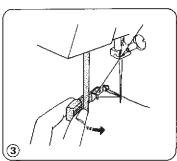
#### To Use Needle Threader



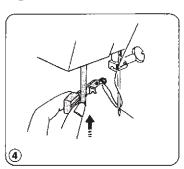
 Raise the needle to its highest position. Lower the needle threader knob (A) affar as it will go.



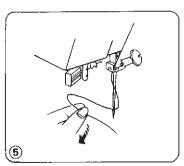
② Turn the knob (A) in the direction of the arrow in the illustration, then insert the hook (B) into the needle eye. Lead the thread around the guide (C) and under the hook (B).



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

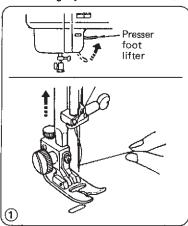


(4) Raise the needle threader knob (A) slowly to draw the thread loop up.

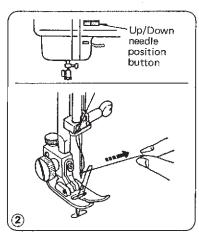


(5) Pass the end of the thread through the needle eye by pulling the thread loop to the back.

#### • Drawing Up the Bobbin Thread

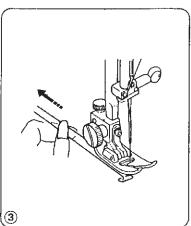


1 Hold the needle thread lightly with your left hand.



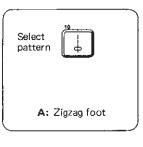
Press the up/down needle position button twice to pick up the bobbin thread.

Draw up the needle thread together with a loop of bobbin thread.

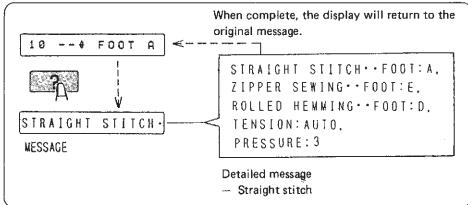


(3) Slide 15 cm (6") of both threads to the back under the presser foot.

#### Straight Stitching

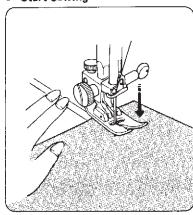


#### Use the message button



When you press the message button, the message on the liquid crystal display will scroll to the left after 2 seconds.
 When you want to stop the scrolling — Press ?

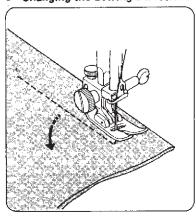
#### Start Sewing



- Raise the presser foot and position the fabric.

  Lower the needle to the point where you want to start.
- 2 Lower the presser foot and place the threads toward the back. Depress the foot control.
- \* When you begin sewing, the following are available: reverse stitching while pressing the reverse button, or use of pattern (with automatic reverse stitch). (See page 19)

#### . Changing the Sewing Directions

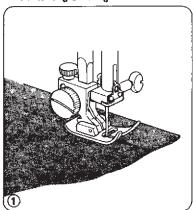


Stop the machine and bring the needle down into the fabric by pressing the up/down needle position button.

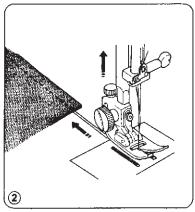
Raise the presser foot.

Pivot the fabric around the needle to change sewing direction as desired. Lower the presser foot.

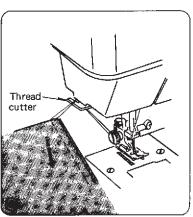
#### Finishing Sewing



- 1 For fastening the ends of seams, press the reverse stitch button and sew several reverse stitches.
  - \* When pattern is selected, if you press the reverse button, the machine will sew a lock stitch and stop.

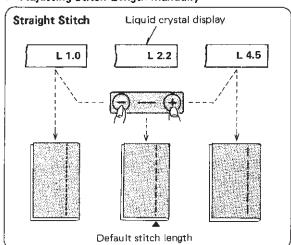


(2) Raise the presser foot and remove the fabric, drawing the threads to the back.



3 The threads are cut the proper length for starting the next seam.

#### Adjusting Stitch Length Manually



When you press — + button, the default setting
 (2.2) will appear on the screen.

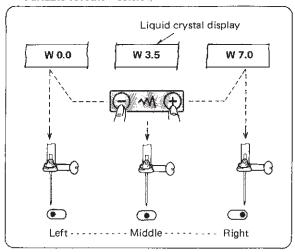
It can be set between 0 and 4.5.

Press button and the number on the screen will get smaller, and the stitch length will get shorter.

Press button and the number on the screen will get bigger, and the stitch length will get longer.

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

#### Variable Needle Position



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



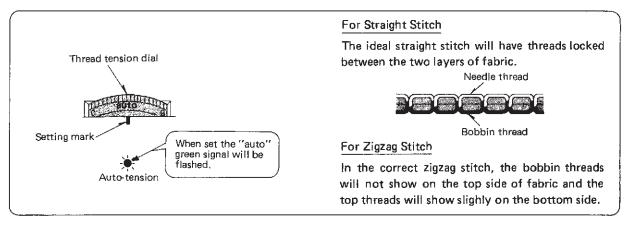
# Variation of Straight Stitching

STITCH	Foot	USES
#10 or #11	Zigzag (A)	When the machine is turned on, it's automatically set to sew a straight stitch. This stitch can be used for regular seams, zippers, topstitching, etc.
#12	Zigzag (A)	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.
#13             	Zigzag (A)	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.
#18	Zigzag (A)	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.
#19       	Zigzag (A)	Topstitching suits, blazers, jumpers denim outfits.

#### To Set Thread Tension

#### Auto-tension

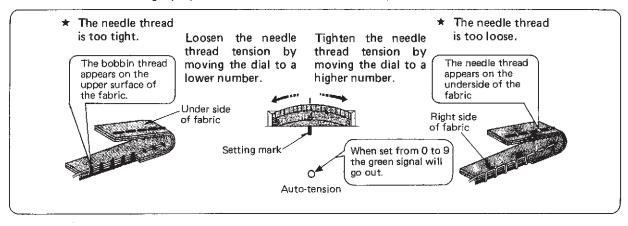
Set "auto" for ordinary sewing to get well-balanced thread tension.



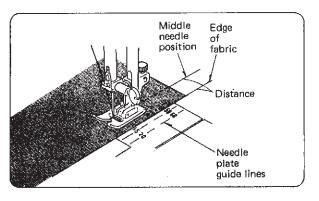
#### Manual Needle Thread Tension

Adjusting the manual needle thread tenison may be required when some types of fabrics and threads are being used.

Set the dial from 0 to 9 to get proper thread tension balance as follows;



#### Sear / Guide / Line

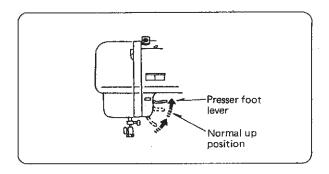


The seam guides on the needle plate help you measure seam width.

Number	15	20	4/8	5/8	6/8
Distance (cm)	1.5	2.0	1.3	1.6	1.9

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

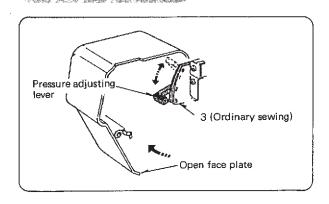
#### Milen Sewing Heart Fabrice



 The Presser Foot Lever raises and lower the presser foot.

You can raise it about 1/4" higher than the normal up position for easy removal of the presser foot or to help you place heavy fabrics under the presser foot.

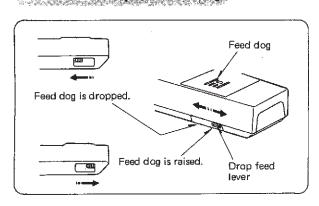
#### Preside Administra Layer



The pressure adjusting lever should be set at "3" for regular sewing. Reduce the pressure to "2" for applique, cut work, 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.

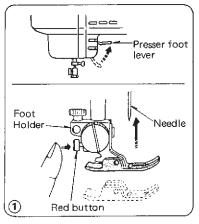
#### To Haise or Drop the Peed Dog



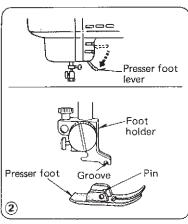
- For button sewing, etc., drop the feed dog.
- O After finished sewing, raise the feed dog.

The feed dog must always be up for normal sewing.

# To Snap the Presser Foot On and Off

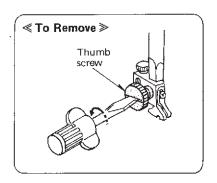


1 Press the red button on the back of the foot holder. The presser foot will drop off.

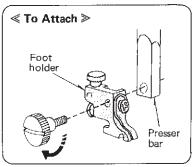


(2) Place the presser foot so the pin on the foot lies just under the groove of the foot holder. Lower the presser foot lever to lock the foot in place.

# To Remove and Attach the Foot Holder



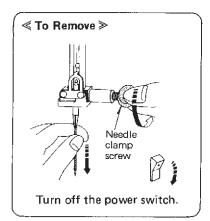
Remove the thumb screw by turning the screw counter-clockwise with the screwdriver.



#### To Attach:

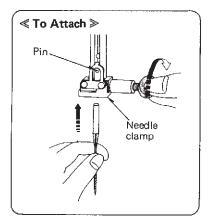
- 1. Match the hole in the foot holder with the threaded hole in the presser bar.
- 2. Fit the thumb screw into the hole.
- Tighten the screw by turning it clockwise.

#### Changing Needles



Loosen the needle clamp screw by turning it counter-clockwise.

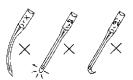
Remove the needle from the clamp.



Insert the new needle into the needle clamp with the flat side away from you.

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 needle may cause skipped stitch or breaking thread.
- \* Always purchase a good quality needle.



#### Proper Your Needle are Thread

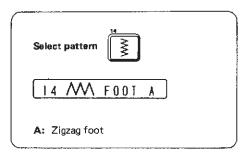
#### Needle, Thread and Fabric Chart

LIGHT Crepe de Chine, Voile, WEIGHT Lawn, Organdy, Georgette, Tricot		THREADS	NEEDLE SIZE 9 or 11	
		Fine Silk Fine Cotton Fine Synthetic Fine Cotton Covered Polyester		
MEDIUM Linens, Cotton, Pique, NEIGHT Serge, Double Knits, Percale		50 Silk 50 to 80 Cotton 50 to 60 Synthetic Cotton Covered Polyester	11 or 14	
HEAVY Denim, Tweed, Gabardine, WEIGHT Coating, Drapery and Upholstery Fabric		50 Silk 40 to 50 Cotton 40 to 50 Synthetic Cotton Covered Polyester	14 or 16	

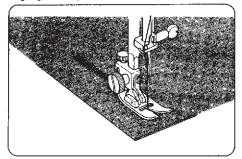
#### NOTE:

- \* In general, fine threads and needles are used for sewing thin fabrics, and thicker threads and needles are used for sewing heavy fabrics. Always test thread and needle size on a small piece of fabric which will be used for actual sewing.
- \* Use the same thread for needle and bobbin.
- \* When sewing stretch, very fine fabrics and synthetics, use a blue tipped needle. The blue tipped needle effectively prevents skipped stitches.



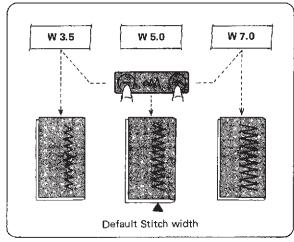


#### Zigzag sewing



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

#### Adjusting Stitch Width Manually



O By pressing the button, the stitch width can be adjusted.

Default setting is "5.0" and can be adjusted between 0 and 7.

To increase, press the w the button.

The number on the screen will get bigger and stitch width will become wider.

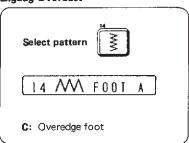
To decrease, press the \( \hat{M} \to \) button

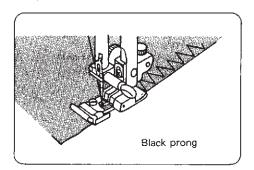
The number on screen will get smaller and stitch width will become narrower.

Hold down the — or + key until you reach the setting you desire.

# evaluating.

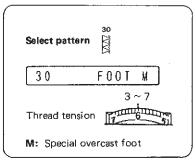
#### Zigzag Overcast

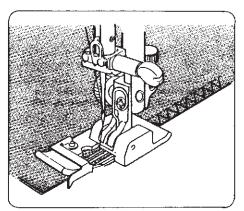




Place the edge of the fabric next to the black prong of foot C.

#### **Overlock Stitch**





Using foot M, guide the black prong next to the fabric edge.

The wire farthest to the right will lie off the fabric edge providing support for the stitches interlocking off the edge.

- \* Reduce the needle thread tension on light-weight fabrics until the threads interlock at the fabric edge.
- \* Stretch fabrics may require you to adjust the stitch length manually.
- \* The stitch width cannot be adjusted.

#### Overcasting Variations

Overcasting Variations				
Sewing	Stitch Pattern	Foot	USES	
Multiple zigzag	15 <b>/</b> / <b>\</b> /\/	Zigzag (A)	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.	
Knit stitch	20 	Zigzag (A)	This stitch is recommended for sewing such fabrics as swimwear and stretch velour as it provides the greatest amount of elasticity and strength.  A pressure of "1" is recommended so that the knit will retain shape as you are sewing.	
Zigzag stitch	14	Overedge (C)	This stitch can be used on most woven fabrics. It's the fastest way to finish and leaves you with a neat, flat edge.	
(NAXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	16	Overedge (C)	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.	
Double overedge	29		This stitch is an excellent stitch for fabrics that tend to fray extensively such as linens and gabardines. Two rows of zigzag stitches are simulitaneously sewn over the edge to insure that your seams will not revel.	
stitch		Overedge (C)		
, Taxa	30 ////////////////////////////////////		This stitch finishes the edges of your seams similar to a commercial overlocking machine for a professional look.	
Overlock		Special overcast (M)		

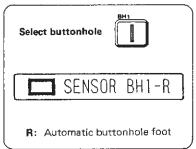
#### **Buttonhole**

Buttonhole Variations (Choosing the suitable buttonhole from BH1 to BH5)

Pattern	Liquid crystal display	Uses
BH1	SENSOR BH1-R	Thin, small button (shirt, blouses)
	AUTO BH1-R	
BH2	BH2 FOOT R	Thin (blouses, shirt)
ВНЗ	■ BH3 FOOT R	Thick, large button (suit, overcoat)
23 BH 4	BH4 FOOT R	Stretch fabrics (jersey) (knit)
24 BH 5	BH5 FOOT R	

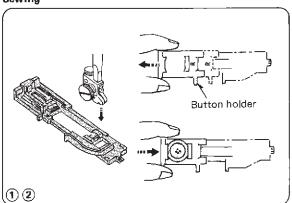
\* To select auto buttonhole, press button twice.

#### Sensor Buttonhole (BH1)

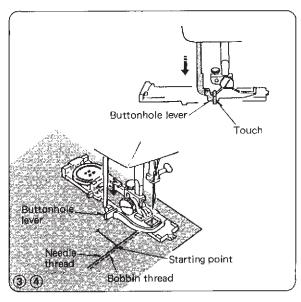


- \* The automatic buttonhole foot will automatically gauge the buttonhole length.
- \* The maximum diameter of button which will fit in this foot is 2.5 cm.
- \* Before you sew a buttonhole on the actual garment, make several practice buttonholes.

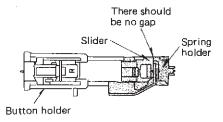
#### Sewing

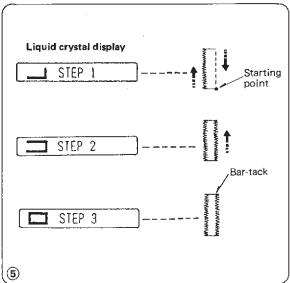


- 1 Press the Up/Down needle position button to raise the needle. Raise the presser foot lever.
- (2) Attach the automatic buttonhole foot R.



- ② Pull the buttonhole lever downward as far as it will go. Remove the fabric to the left to draw both threads to the left.
- 4 Insert the garment under the foot, and lower the needle at the starting point. Then lower the automatic buttonhole foot.
- \* There should be no gap between the slider and spring holder of the foot as shown below.





- ⑤ 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.

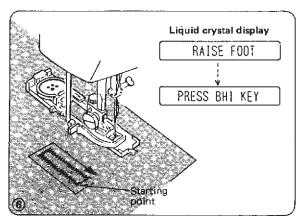
Before you sew buttonholes on the actual garment, make <u>several</u> practice buttonholes.

#### NOTE:

If the thickness of button is more than 4 mm (3/16"), add the thickness and diameter then set the button holder.

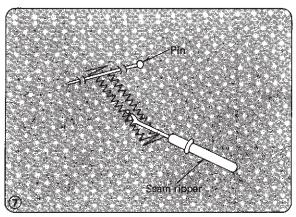
#### **EXAMPLE:**

If the button is 2 cm (3/4") in diameter and 0.5 cm (3/16") in thickness, set the measure at 2.5 cm (31/32").



6 To sew another buttonhole or to start from the beginning of the buttonhole press the key BH1, then depress the foot control.

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



Remove the fabric and place a pin just before the bartack at each end to prevent accidentally cutting bartacks.

Cut the opening with the seam ripper.

When sewing BH4 or BH5

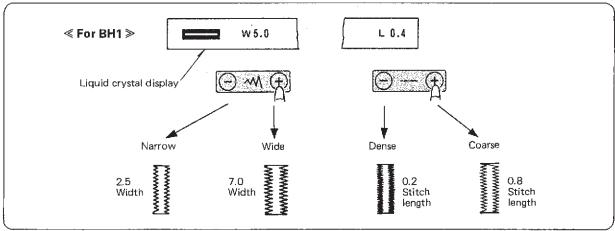
After sewing BH4 or BH5, the screen will show "Step 1".

To make the next buttonhole, simply reposition the fabric and step on the foot control.

To reinforce the buttonhole or make it denser simply depress foot control again without raising the buttonhole foot.

#### . To Alter the Stitch Width

#### To Alter the Stitch Density



To alter the width press (-) or (+) .

The width can be altered between 2.5 and 7.0.

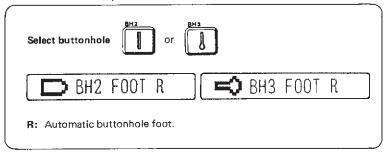
By pressing the button, the stitch length indicator shows 0.4.

To alter the density press (-) or (+).

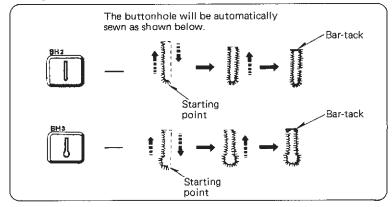
The density can be altered between 0.2 and 0.8.

When the pattern 물랙 or 다양 is selected, density can be altered between 0.5 and 1.0.

#### • Rounded and Keyhole Buttonholes

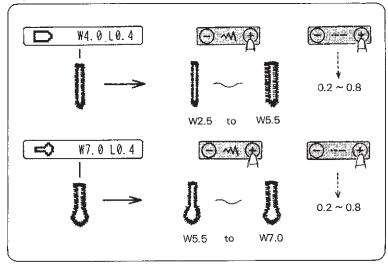


#### Sewing



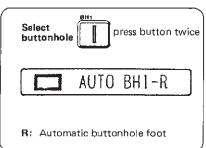
To sew, follow the same procedure as for pattern BH1.

#### Adjust the Stitch Width and Density



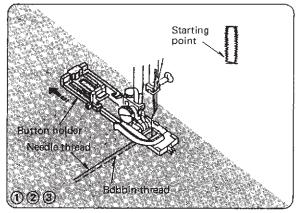
- Adjust the stitch density according to the material and thread. (See page 23)
  - 0.2 . . . . Fine density (for lawn and georgette)
  - 0.4 . . . . Standard density
    (for gabardine, denim and other thick or heavy materials)
  - 0.8 . . . . Coarse seam
    (for thick wool and jersy knits)

#### Automatic Buttonhole (BA1)

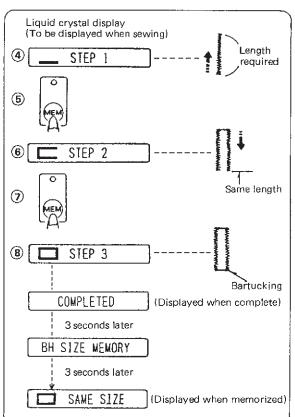


- \* To alter the stitch width and density, refer to page 29.
- \* If there is a difference in stitch density between the right and left rows of the buttonhole, refer to page 52.

#### Sewing



- 1) Pull the button holder to the far back.
- ② Insert fabric under the foot.
  Remove the fabric to the left to draw both thread to the left.
- ③ Insert the garment under the foot, and lower the needle at the starting point. Then lower the automatic buttonhole foot.



- (4) Sew desired length of left side of the buttonhole and stop.
- (5) Press "MEM" button.
  Depress the foot control. The machine will automatically bartack and sew up the right side of the buttonhole.
- 6 Stop the machine when you are just over 2 or 3 stitches to opposite the first stitch on the left hand side.
- (7) Press "MEM" button.

Keep the foot control depressed. The machine will bartack, knot the stitches and stop sewing by itself.

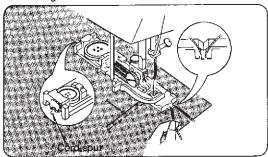
To make the next buttonhole, position the fabric and step down on the foot control.

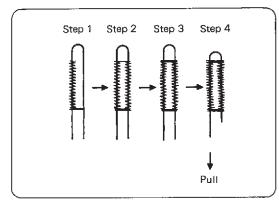
The Memory Craft 4000 will sew another buttonhole identical to the first each time you step down on the foot control.

\* To reinforce the buttonhole or make it denser simply, depress foot control again without raising the buttonhole foot.

#### Corded Buttonholes

Threading the cord.

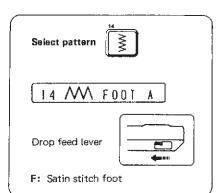




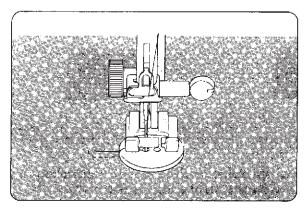
- For sewing, use the same procedure as when the pattern is selected.
- \* Set the stitch width in accordance with the thickness of the cord used.

- (1) Select pattern BH1.
- (2) With the buttonhole foot raised, hook the filler cord on the cord spur at the back of the buttonhole foot.
- (3) Bring the ends toward you under the buttonhole foot until they clear the front end.
- (4) Hook the filler cord into the forks on the front of the R foot to hold them tight.
- (5) Lower the needle into the garment where the buttonhole will start and lower the foot.
- 6 Depress the foot control gently and sew the buttonhole. Each side of the buttonhole and the bartacks will be sewn over the cord.
- (7) Remove the fabric from the machine and cut the sewing threads.
- (8) Pull the left end of the filler cord to tighten it.
- Thread the end through a darning needle, draw to the wrong side of the fabric and cut.

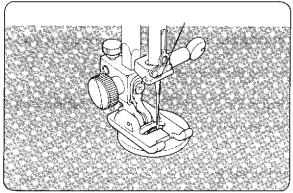
#### Sar a Burran



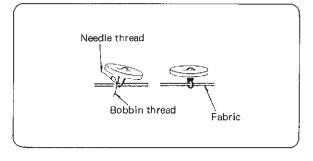
Set the stitch width in accordance with the position of the holes on the button.



- Match the button holes to the horizontal slot on the presser foot.
- 2. Lower the foot to hold the button in place.
- Turn the hand wheel by hand until the needle point is just above the button.
- 4. Press the stitch width button (+ or −) so the needle will enter the left hole of the button.

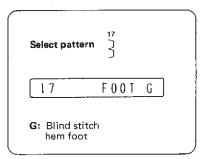


- Turn the hand wheel so the needle will enter the right hole of the button. Readjust the stitch width if necessary.
- 6. Stitch several times.
- After you finish sewing, cut the thread but leave 10 to 15 cm of thread at the button.



Draw the thread to the reverse side of the fabric and knot the threads.

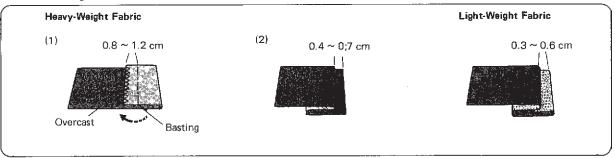
#### Sign Charles Heathaile



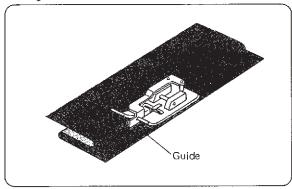
\* Use pattern \begin{cases} \frac{17}{2} & for woven fabrics and pattern \begin{cases} \frac{21}{2} & for stretch \\ fabrics. \end{cases}

On light-weight fabrics the raw edge can be turned under and pressed. On heavy-weight fabrics that ravel, the raw edge should be overcast first. Fold up the desired amount and pin in place. Then fold the hem under the fabric as illustrated.

#### To hold the edge



#### Sewing



Position the fabric in such a way that the folded edge comes to the left side of guide.

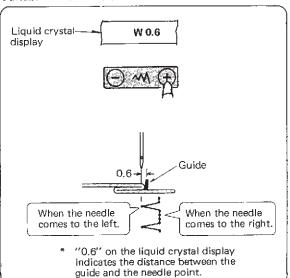
Lower the presser foot.

Adjust the position of needle swing with the WIDTH/ LENGTH key so that the needle just pierces the folded edge of the fabric when the needle comes over to the left side.

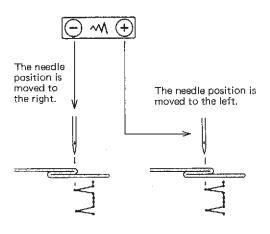
Sew guiding the folded edge along the guide.

By pressing the button, the hemming width indicator shows 0.6 as default setting.

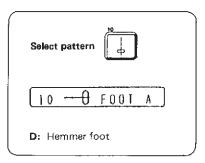
#### Variable Needle Position

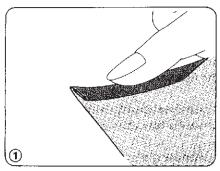


How to adjust

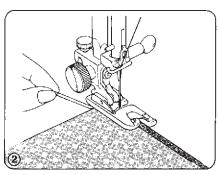


#### **Rolled Hem**



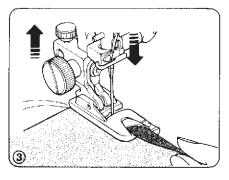


Make a double 0.25 cm (1/8") fold approximately 8 cm (3") in length.

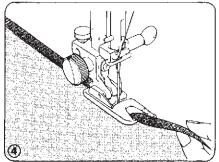


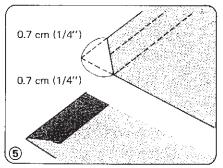
2 Lower the needle into the fabric at the point where sewing is to begin, then lower the hemmer foot.

Sew 3 or 4 stitches while holding the needle and bobbin threads.

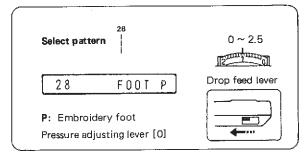


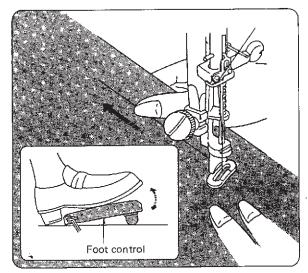
- 3 Lower the needle into the fabric and lift the hemmer foot. Insert the folded portion of the fabric into the curl of the hemmer foot.
- 4 Lower the hemmer foot, then sew by lifting up the edge of the fabric to keep it feeding smoothly and evenly.
- (5) Trim about 0.7 cm (1/4") from corners as illustrated, to reduce bulk.





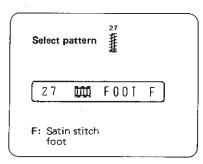


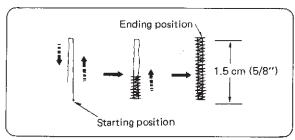


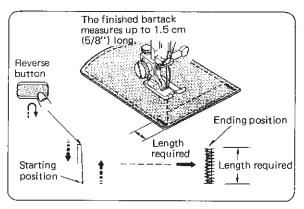


- 1 Draw both needle and bobbin threads to the back.
- ② Depress the foot control. The machine will take one stitch and stop automatically. Release the foot control.
- 3 Hold the fabric taut and slide it to where you want the next stitch. Depress the foot control.
- 4 Continue in this manner sliding the fabrics sideways or forward.
  - \* When basting is completed, reset the pressure adjusting lever, replace foot holder, and raise the feed dog.









 Density and width can be varied using the stitch width and stitch length buttons:

Stitch length  $\bigcirc -- \bigcirc$ 

 When you make less than 1.5 cm of bartacking, first sew the desired length of bartacking and press the reverse button. The fabric will move backwards.

#### ≪ Memory Bartacking ≫

Press



button, and start sewing, you will obtain

same length of bartacking.

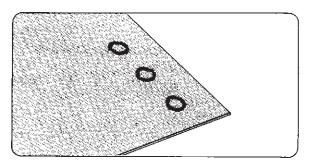




25 FOOT F

F: Satin stitch foot

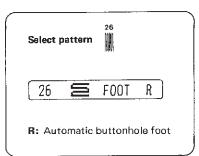
Use underlay of tissue paper.

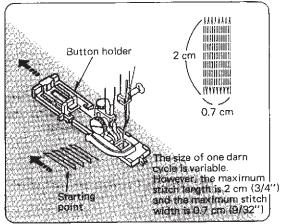


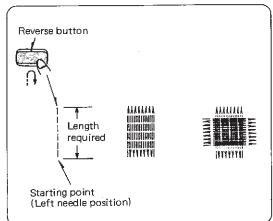
Press down the foot control. The machine will sew an eyelet and stop automatically.

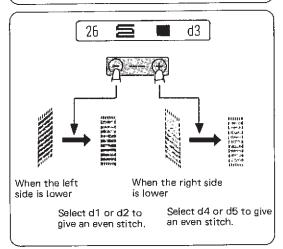
Remove the fabric and cut the small eye with the seam ripper or a pair of pointed scissors.

# Quick Dam









- (1) Pull the button holder to the far back.
- ② Insert a fabric under the foot.
  Remove the fabric to the left to draw both threads to the left.
- (3) Insert the garment under the foot, and lower the foot. Press down the foot control. The machine will lock stitch, sew 16 rows of darning, lock stitch and stop automatically.

To sew from the start, select pattern

(4) For darning in a length of less than 2 cm, first stop the machine after sewing to a required length and then press the reverse button and continue sewing until the machine stops automatically.

Rearrange the fabric and repeat the procedures in  $\bigcirc$  to  $\bigcirc$  to

It is simple to make a darning of the same size as the first one.

Press the memory button when you have completed the first darning, and depress the foot control. Then the second darning is automatically made. Pressing the mirror image button instead of memory button will give the same result but the darn is sewn in reverse.

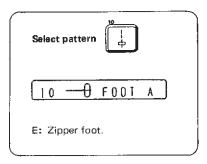
#### To Adjust the Evenness of Darning

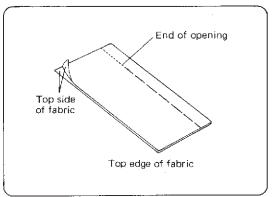
If there is a difference in height between the starting point (left side) and the end point (right side) of darning, make adjustment by pressing the — or + button.

Upon pressing the button the default setting "d3" will appear on the screen.

Press Dutton, and adjust between d1 and d5.

### Zipper Sewing

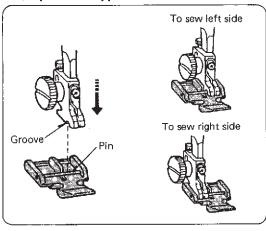




#### Prepare your fabric.

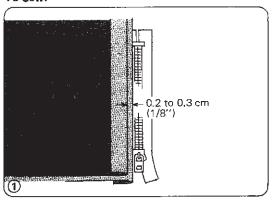
- 1. Put the top sides of the fabric together and sew to the end of the zipper opening. Use the reverse button to lock the stitches.
- 2. Set the stitch length at "4.5" and sew the zipper openning.

#### To Snap On the Zipper Foot:



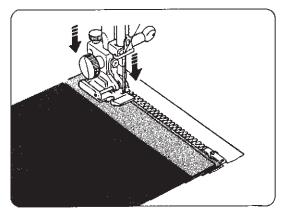
- Fit the pin on the zipper foot into the groove on the foot holder
- \* To sew the right side of the zipper, attach the zipper foot on the left hand side.

#### To Sew:

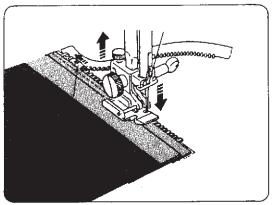


1) Fold back the left seam allowance. Turn under the right seam allowance to form a 0.2 to 0.3 cm (1/8") fold.

Place the zipper teeth next to 0.2 to 0.3 cm (1/8'') fold and pin in place.



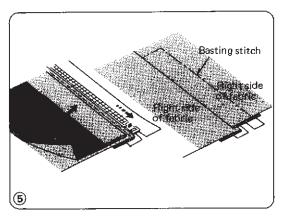
- (2) Attach the zipper foot with the pin on the right hand side.
- 3 Lower the zipper foot on the top side at the bottom of the zipper so that the needle pierces the fold and the zipper tape.



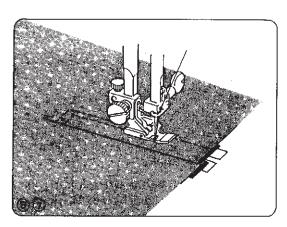
Sew through the fold and zipper tape.
Stop just before the zipper foot reaches the slider on the zipper tape.

Lower the needle slightly into the fabric.

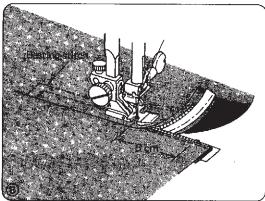
Raise the zipper foot and open the zipper. Lower the foot and stitch the remainder of the seam.



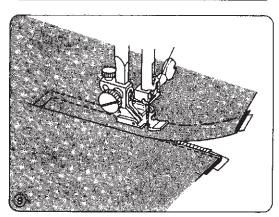
(5) Close the zipper and spread the fabric flat with the right side facing up.



- 6 Move the zipper foot to the left pin.
- (7) Guide the edge of the foot along the zipper teeth and stitch through the garment and zipper tape.

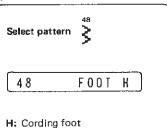


(8) Stop about 5 cm (2") from the top of the zipper. Lower the needle slightly into the fabric, rasie the foot, remove the basting stitches and open the zipper.

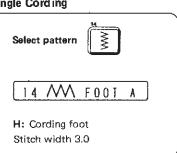


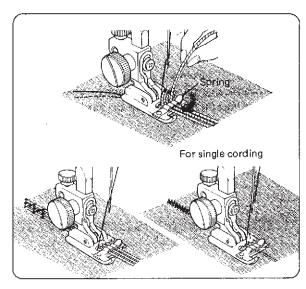
(9) Then lower the foot and stitch the remainder of the seam making sure the fold is even.

#### **Triple Cording**



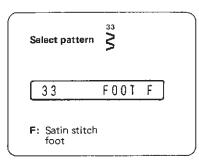
#### Single Cording

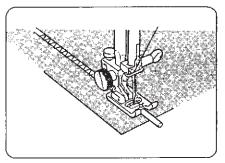




- 1) Slide the sewing threads to the left and insert three strands of cording into the slots of foot H with 5 cm (2") extending behind the foot.
- (2) The slots on foot H will hold the lengths of cording in place while the stitches form over the cording.
- Insert cording in the center groove of foot H for single cording.
- O Fine wool, embroidery thread or lace thread can be used for cord.

#### Wide Cording





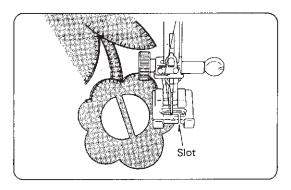
Pass a cord, string or blade of 0.5 to 0.6 cm (1/4") wide into bottom groove of presser foot, and sew along drawn lines. It is advisable to sew the cord end before starting.

#### **Applique**

Select pattern

31 F001 F

F: Satin stitch foot Pressure adjusting lover: 2



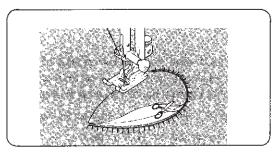
Tape the applique in place and sew, guiding the slot on foot F next to the finished edge of the applique.

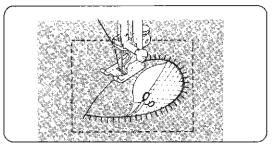
- \* When sewing curves or changing directions, press the up/ down button to bring the needle to its lowest position, and move the material.
- \* After finished sewing, set the pressure adjusting lever to 3.

#### **Cut Work**

31 FOOT F

F: Satin stitch foot Pressure adjusting lever: 2





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.

Use a different color to accent you work.

Baste the layers together stitching just inside the outline.

Remove pins.

Stitch around the design in pattern or use a narrow satin stitch.

Remove basting and cut the fabric close to the stitching with embroidery scissors.

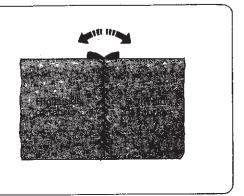
\* After finish sewing, set the pressure adjusting lever to 3.



Select pattern

32 F00T A

A: Zigzag foot or F: Satin stitch foot



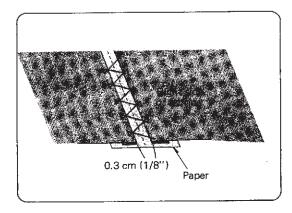
Sew seam and press seam allowance open. Sew pattern stitch on right side of garment centering stitches over the seam line.



Select pattern

60 F00T A

A: Zigzag foot or F: Satin stitch foot



An open worked 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.

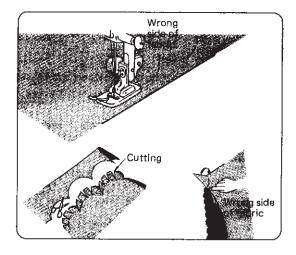


Select pattern

34

F 0 0 T A

A: Zigzag foot



# Variations of stitch width, length using manual stitch width key and stitch length key

	, , , , , , , , , , , , , , , , , , , ,				
Stitch Width	Stitch Length	Seam Variations			
Automatic Setting					
7.0	2.5				
7.0	1.0	~~~~			
2.5	1,0				

Fold hem with right sides togehter. 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.

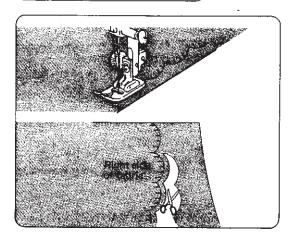
#### **Edging**

Select pattern

35

F 0 0 T A

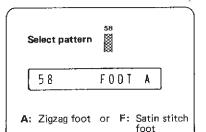
A: Zigzag foot



Sew edging 1 cm (3/8") from edge.

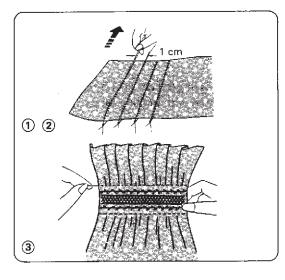
After stitching, trim fabric close to stitching taking care not to cut the thread.

#### **Smocking**



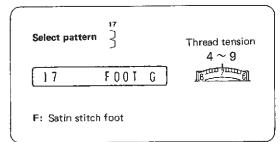
The following patterns can be used.





- ① With the manual stitch length at '4.5' 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.
- ② Puil the bobbin threads and distribute the gathers evenly.
  Secure the threads at the other end.
- 3 Reduce the tension and pressure if necessary and sew pattern stitches between the straight seams. Pull out the gathering stitches.

### Shell Stitch

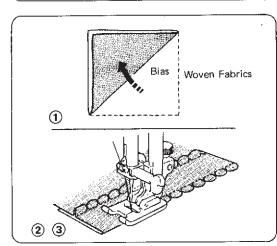


Press



button to change needle position for shelltuck.

Pattern 3 can be also used.



#### Here's How

- (1) 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.
- (2) If you sew rows of shell stitches, space the rows 1.5 cm apart.
- (3) You can sew shell stitches on knits or soft silky wovens in any direction.

After sewing, set the thread tension to "AUTO".

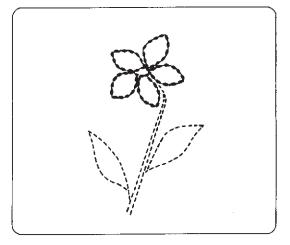
### Sculpture Stitch

Select pattern

90

FOOT F

F: Satin stitch foot Pressure Adjusting lever 2



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 foward stitch.

Trace your design on the right side of the fabric. Place a tear away backing underneath for extra support on light weight fabrics.

Stitch slowly by guiding foot F over the traced line, pivoting at corners. Secure the threads with the locking stitch.

#### Sand Stitch

Select pattern

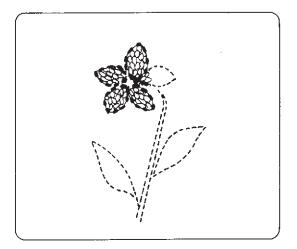
57 83

57

FOOT F

F: Satin stitch foot

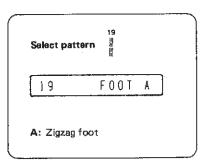
Pressure Adjusting lever 2 or

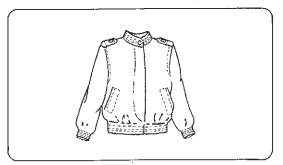


The sand stitch fills outlined designs.

Sew in rows starting at the edge.

Manually decrease the stitch width to fill in small spaces.

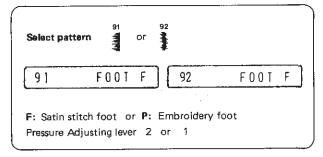


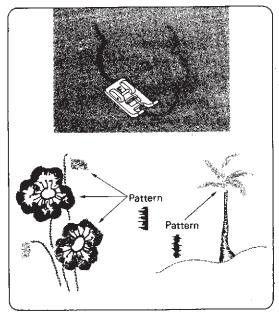


#### Here's How

- 1. Sew as you would for topstitching.
- 2. To turn corners:
  - a. Lower the needle into the fabric on the fourth stitch.
  - b. Raise the presser foot and turn the fabric.
  - c. Lower the presser foot and continue to sew.

## Shading Strickes



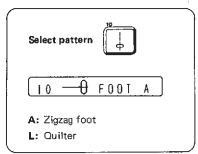


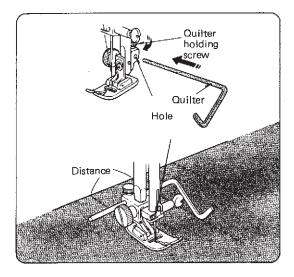
Use the automatic settings or manually adjust the stitch length and width to achieve the desired effect.

Reduce the pressure to facilitate sewing curved areas.

You may need to pivot on sharp curves.

## Quilting

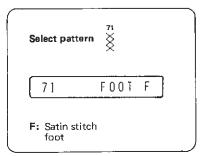


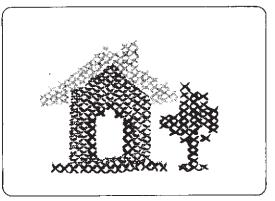


The quilting guide will help to keep the stitching lines straight. Loosen the quilter screw. Slide the quilter in the opening to the desired width and tighten the screw.

Sew guiding the quilter over the previous row of stitching.

# Gross Strich

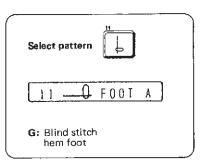


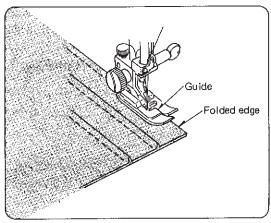


This pattern can be reduced in size by pressing the button.



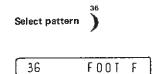






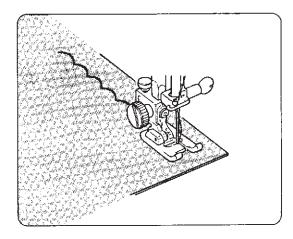
- Fold the fabric with wrong sides together on the foldline.
   Position the folded edge next to the guide.
   Lower the presser foot.
   Sew the folded edge, guiding it along the guide.
- (2) Press the pin tucks to one side.;

# Distorative Sout South



A: Zigzag foot.
F: Satin stitch foot

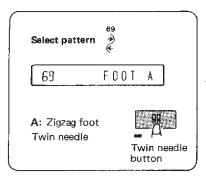
O Patterns No. 37 to No. 50 can be used.



#### Here's How

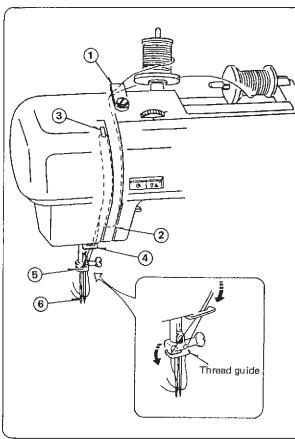
- 1. Adjust the stitch width and length as you desired.
- 2. Practice the stitch on a scrap of fabric.
- Mark the lines for decoration on the fabric, using a washable fabric marker.
- 4. Lower the needle at the starting point.
- 5. Lower the presser foot.
- 6. Lock the stitch at the beginning (press auto-lock).
- 7. Gently guide the fabric along the marked line.
- Use the auto-lock to secure the row of stitches at the end.





The following patterns can be used

- \* When you change the needle, first turn off the switch or unplug the machine.
- \* Insert the spool stand and an additional spool pin, and put the felt and spool on it with the thread coming off the spool as shown.



When threading the machine for twin needle sewing follow this chart making sure you separate the threads, placing one in each thread guide on the needle bar.

At corners, raise the needles till they clear the fabric. Partially raise the presser foot and carefully pivot the fabric.

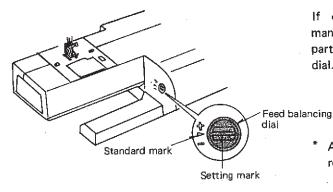
Threading from 1 to 3 is the same as for single thread. Refer to page 13.

- 4 Draw the threads down and slide them through the lower thread guide.
- (5) Slide one of the threads through the needle bar thread guide on the left, and the other one on the right.
- (6) Thread the needle from front to back.
- \* When twin needle sewing is completed, change needle and reset tension.

To return to single needle sewing, press the Twin Needle button or turn off the power switch.

NOTE: To avoid the threads twisting, it is advisable to thread the machine one by one.

# Adjusting Patterns



manual buttonholes are uneven when you sew on a particular fabric, adjust them with the feed balancing dial.

\* After sewing with an altered dial setting, you must reset the dial to " ▷ ".

If decorative stitch patterns, letters/numbers or

# To Adjust the Automatic Buttonhole Stitch Balance

Stitches on each side of the buttonhole should be the same stitch density. If not, adjust as follows:

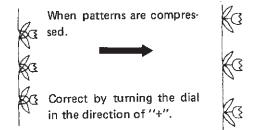


If the stitches on the left hand side are too far apart, turn the feed balancing dial towards the "+" sign.



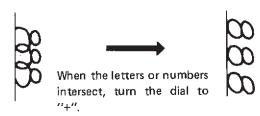
#### To Adjust Distorted Patterns

If patterns are uneven when sewing with a particular fabric, adjust them by turning the feed balancing dial.



#### 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.





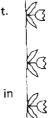
If the stitches on the right hand side are too far apart, turn the feed balancing dial towards the "—" sign.



When patterns are drawn out.



Correct by turning the dial in the direction of "-".



When the letters or

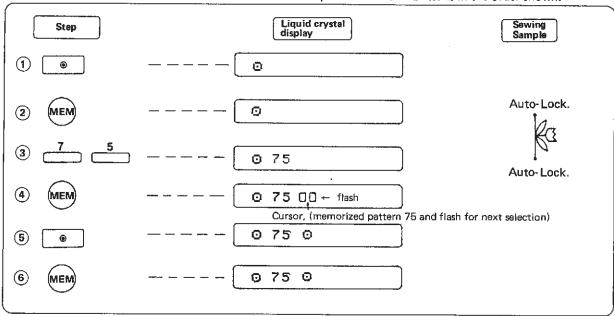
When the letters or numbers are drawn out, turn the dial to "-".



#### Programming Decorative Stitch Patterns

• One Cycle Stitching

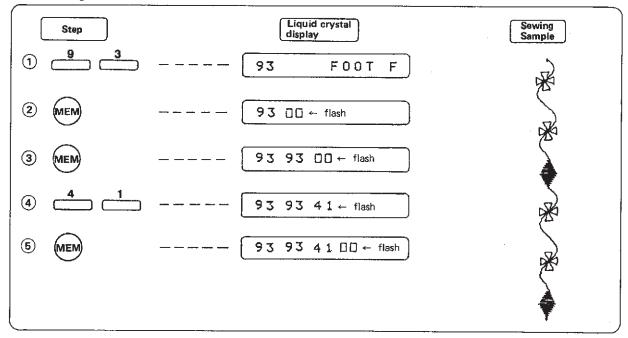
To program stitch pattern combinations, press the pattern selection buttons in the order shown.



You may press Auto-lock before & after the pattern to lock the decorative stitches.

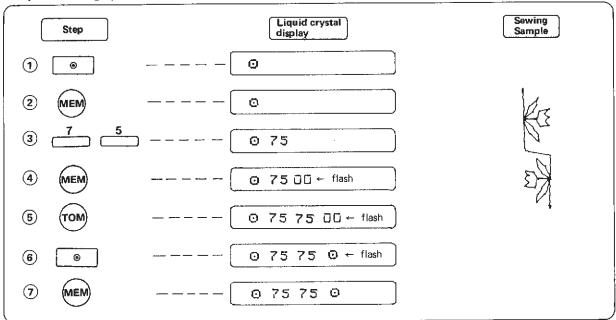
The patterns are showing in page 59.

#### • Combining Patterns



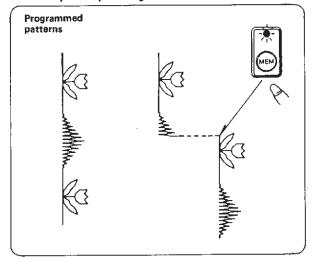
\* The memorized patterns will be sewn repeatedly.

#### • Cycle Stitching by Pressing Mirror Image Button



After selecting patterns and pressing the "TOM" button, the same number of patterns will be sewn in mirro image.

#### When you stop sewing in the middle of a programmed combination

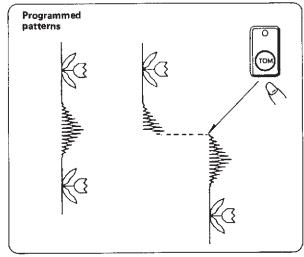


To Start Sewing at the Beginning of Your Pattern Combination:

There may be instances when you want to test a pattern without sewing the whole thing.

Sew as much as necessary, then press the Memory button.

The machine will now start sewing at the beginning of your pattern combination.



To Start Sewing at the Beginning of the Pattern You Have Been Sewing:

If you run out of thread in the middle of a pattern, press the Mirror Image Button.

Remove the stitching of the last pattern only.

Lower the needle at the end of the last completed pattern.

The machine will start sewing at the beginning of the pattern you were sewing when you ran out of thread and continue sewing the remaining patterns.

#### Memory Lock Alphabet and Numbers

The Memory Craft 4000 will sew the 26 letters of the alphabet and numbers in block and script styles. Up to 31 patterns (letters, numbers, punctuation marks, etc.) can be programmed.

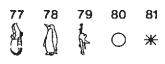
Each letter and number is automatically locked at the beginning and end enabling you to remove the connecting threads. The chart below shows where to clip the extra threads. Each pattern starts at "o".

ABCDEFGHIJKLMNQPQRSI UVWXYZ...&?!.Q123456789 ABCDEFGHIJKLMNOPORST WWWXYZVQ21 Q123456789

#### Memory lock patterns:

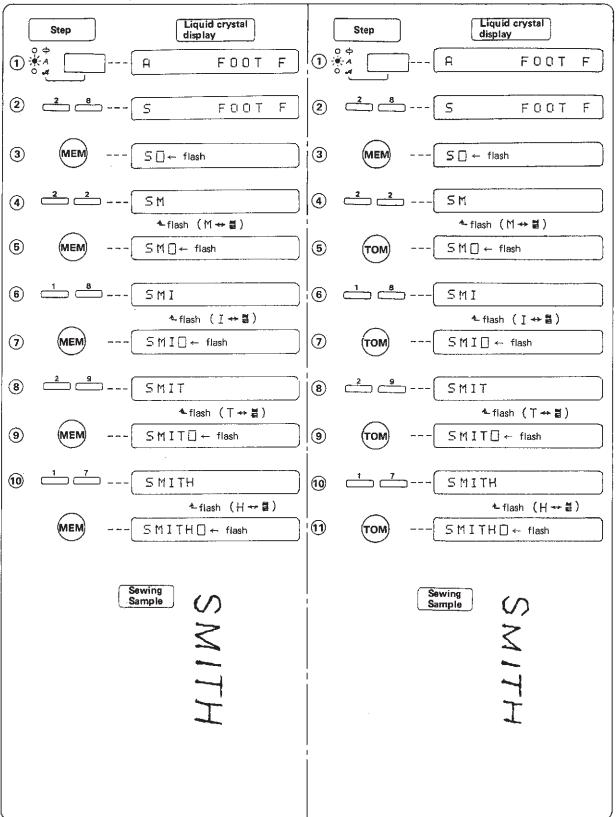
The patterns shown below are automatically locked at the beginning and end of the pattern.

Use them alone as a single design on a shirt or combine them with letters, numbers and other craft patterns.

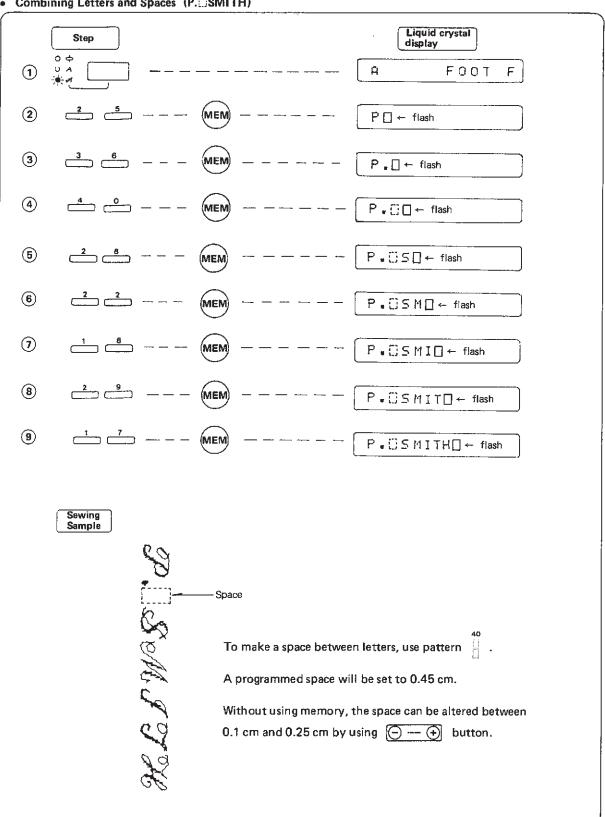




#### · Combining Large and Small Letters



Combining Letters and Spaces (P. SMITH)



# 

(Example) When patterns "A, B, C, D, E, F, G, H, I, J, K, L, M, N, O" are memorized.

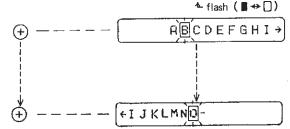
The liquid crystal display will shown [ABCDEFGHIJKLMN]



#### Liquid crystal display





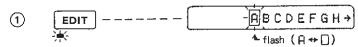


- (1) The screen will move to the right when you press the EDIT button. (" → " means more memorized patterns exist offscreen.)
- 2 Move the cursor to right by pressing width control button (+). (Press — button and the cursor

will move to left.) (" 

" means more memorized patterns exist before pattern I.)

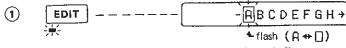
- Press the EDIT button again when editing is complete.
- ★ To Delete Patterns Without Adding: (Example: Delete pattern D)



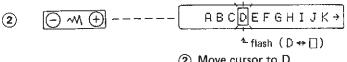
- ABCDEFGHIJK+ (2) flash ( D ↔ □)
- Move cursor to D
- ABCEFGHIJKL→
- O Press "EDIT" button.

#### ★ To Delete and Add Patterns:

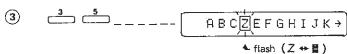
(3)



O Replace D with Z



(2) Move cursor to D



(3) Select pattern 35.

АВС́⊠ЕГСНІЈК⇒ **(4**) flash (Z ↔ []) (4) Press "MEM" button.

Add pattern Z between D and E.

flash ( # ↔ □ )

(2) Move cursor between D and E.

ABCDZEFGHIJ→

flash (Z ↔ ■)

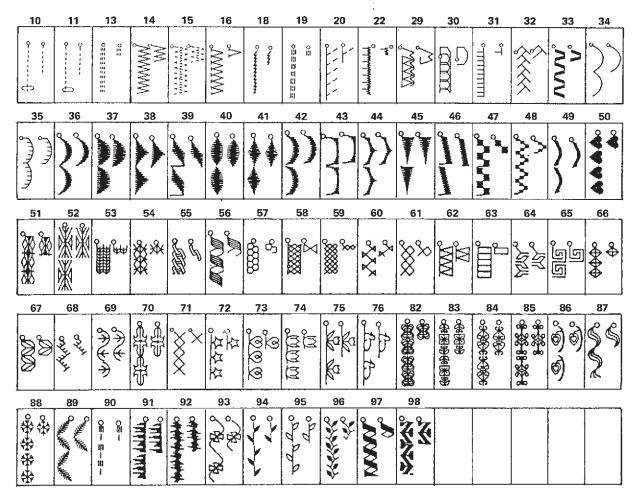
③ Press pattern 35.

явс⊅Z∐́Еғ6Н1J⇒ 4-flash (□ ↔ 🖫 )

(4) Press "MEM" button.

### Unit of Pattern in Programmed Sewing

• The patterns shown on the right hand side indicate the unit of each pattern sewn when the memory key is pressed once.

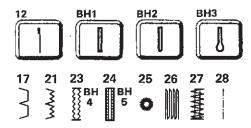


- \* The auto-lock stitch is not programmed on above patterns.
- \* All patterns start at the "O" mark.
- \* If sewn using the zigzag foot, pattern (blind stitch) will change to
- \* The following patterns o \* are one-point sewing.

# 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 31 patterns or letters/numbers can be programmed in the memory. Note, however, that the following patterns cannot be programmed:



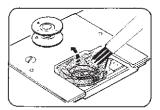
- If you select the wrong pattern in the middle of programming, press the clear key. That pattern alone will be cleared.
- 4. In the following cases, the entire program is cleared.
  - · When the power switch is turned off.
  - If you have been sewing a programmed pattern and then you stop the machine. If you then press any
    pattern key or clear key.
- 5. If an incorrect operation is performed in programming, the MC 4000 will beep to signal an error.

#### Cleaning the Machine

To insure that your machine operates at its best, you need to keep the essential parts clean at all times.

Unplug the machine and remove the presser foot and needle.

#### Cleaning the Bobbin Holder



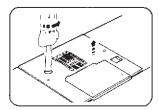
Turn off the power switch or unplug the mahcine.

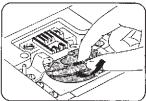
Remove the cover plate by sliding the hook cover plate release button to the right.

Take out the bobbin.

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

#### Cleaning the Hook Race



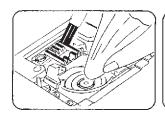


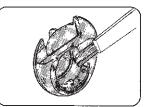
Remove the set screw on the left hand side of the needle plate with the screwdriver supplied with the machine.

Remove the needle plate.

Take out the bobbin. Lift up the bobbin holder and remove it.

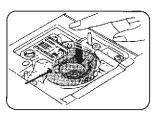
#### Clean the Hook Race and Feed Dog.





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

#### Assemble the Hook Race.





Insert the bobbin holder so that the knob fits next to the stopper in the hook race.

Attach needle plate with screw.

# Fromise Streeting

Condintion	Cause	Reference
The needle thread	The needle thread is not thread properly.	Refer to page 13
breaks.	2 The needle thread tension is too tight.	Refer to page 20
	3 The needle is bent or blunt.	Refer to page 23
	4 The needle is incorrectly inserted.	Refer to page 23
•	5 The needle thread and the bobbin thread are not	Refer to page 15
	set properly under (drawn to the rear of) the	
	presser foot when sewing is starting.	
	6 The fabric is not drawn to the rear when sewing	Refer to page 17
	7 The thread is too heavy for the needle.	Refer to page 23
The bobbin thread	The bobbin thread is not threaded properly in	Refer to page 11
breaks.	the bobbin holder.	
	2 Lint has collected in the bobbin holder.	Refer to page 61
	3 The bobbin is damaged and doesn't turn smoothly.	Change the bobbin
The needle breaks.	The needle is incorrectly inserted.	Refer to page 23
	2 The needle is bent or blunt.	Refer to page 23
	3 The needle clamp screw is loose.	Refer to page 23
	4 The tension of the needle thread is too tight.	Refer to page 20
•	5 The fabric is not drawn to the rear when sewing is finished.	Refer to page 17
	6 The needle is too fine for the fabric being sewn.	Refer to page 23
Screen is not clear.	The sharpness of the liquid crystal display is not	Refer to page 7
	adjusted properly.	Readjust
Skipped stitches.	1 The needle is incorrectly inserted.	Refer to page 23
	2 The needle is bent or blunt.	Refer to page 23
	3 The needle and/or threads are not suitable for the work being sewn.	Refer to page 23
	4 A blue tipped needle is not being used for sewing stretch, very fine fabrics and synthetics.	Refer to page 23
	5 The needle thread is not threaded properly.	Refer to page 13
	6 The presser foot pressure is not strong enough.	Refer to page 21
	7 The wrong needle is used.	Change the needle
Seam puckering	The needle thread tension is too tight.	Refer to page 20
And backering	2 The needle thread is not threaded correctly.	Refer to page 11, 12, 13
	3 The needle is too heavy for the fabric being sewn.	Refer to page 23
	4 The stitch length is too long for the fabric.	Make stitch denser
	5 The presser foot pressure is not correctly adjusted.	Refer to page 21
The cloth is not	The feed dog is packed with lint.	Refer to page 61
feeding smoothly.	2 The presser foot pressure is too weak.	Refer to page 21
	3 The stitches are too fine.	Make stitch coaser
	4 The feed dog was not raised after "drop feed" was used.	Refer to page 21

Condition	Cause	Reference Refer to page 20
Gathering	1 The needle thread tension is too loose.	
	2 The needle is too heavy or light for the fabrics being sewn.	Refer to page 20
The machine	1 The machine is not plugged in.	Refer to page 6
doesn't work.	2 A thread is caught in the hook race.	Refer to page 61
	3 The bobbin winder spindle is kept in the winding position.	Refer to page 11
Patterns are distorted.	The bobbin winder spindle is kept in the winding position.	Refer to page 11
The automatic buttonhole stitches	The stitch length is not suitable for the fabric being sewn.	Refer to page 29
are not working.	2 Interfacing is not used with stretch fabrics.	
Noisy operation.	1 There is thread caugh in the hook race.	Refer to page 61
-	2 Lint has built up in the bobbin holder or hook race.	Refer to page 61