

# **RICCAR**

Your Promise for Performance.

Model REC6000

# INSTRUCTION MANUAL

This sewing machine is intended for household use.

## **IMPORTANT SAFETY INSTRUCTIONS**

When using a sewing machine, basic safety precautions should always be followed, including the following.

**Read all instructions before using.**

### **DANGER** - To reduce the risk of electric shock:

1. Never leave unattended when plugged in. Always unplug this machine from the electric outlet immediately after using and before cleaning.
2. Always unplug before relamping. Replace bulb with same type rated 15 Watts.

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

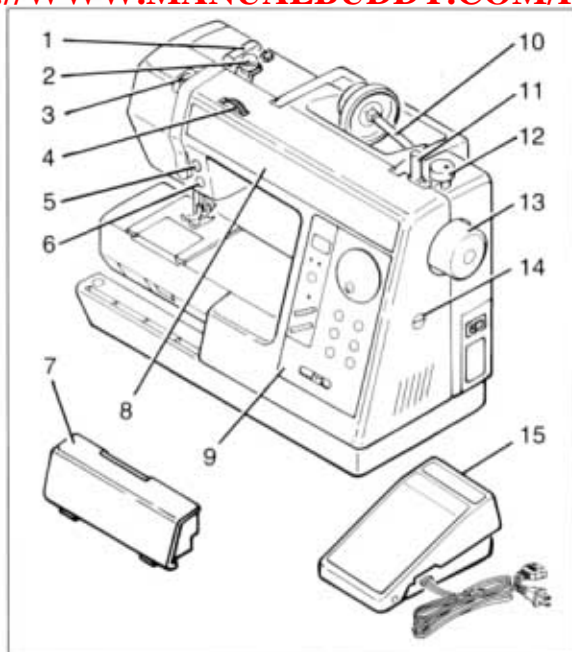
1. Do not allow to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.
2. Use this sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
3. Never operate this sewing machine 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 sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the sewing machine with any air openings blocked. Keep ventilation openings of the sewing machine and foot controller free from the 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 the power switch to the off 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 when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot.
15. Always unplug 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**

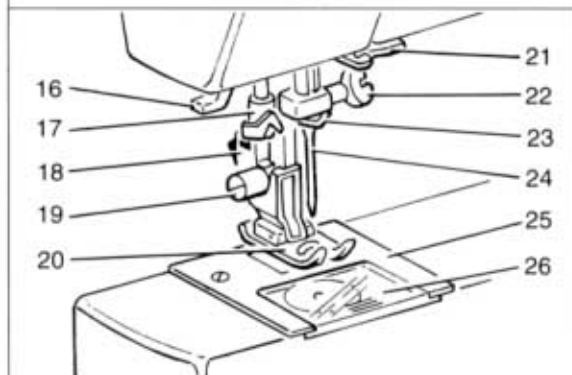
CONTENTS	
MAIN PARTS .....	2
ELECTRICAL CONNECTION .....	3
NEEDLE UP-DOWN POSITION .....	4
SPEED CONTROL BUTTON .....	4
REVERSE STITCHING .....	4
SELECTING STITCH PATTERNS .....	5
SETTING STITCH LENGTH AND WIDTH .....	6
THE 2-IN-1 FREE-ARM SEWING SURFACE .....	7
ACCESSORIES .....	8
CHANGING THE PRESSER FOOT .....	9
INSERTING THE NEEDLE .....	9
SETTING THE BOBBIN .....	10
THREADING THE MACHINE .....	12
DRAWING UP THE LOWER THREAD .....	14
STARTING TO SEW .....	14
REMOVING THE WORK .....	15
FASTENING OFF THE ENDS OF SEAMS .....	15
TURNING CORNERS .....	15
ADJUSTING THE THREAD TENSIONS .....	16
SEWING WITH STRAIGHT STITCHES .....	18
SEWING WITH ZIGZAG STITCHES .....	19
ELASTIC STITCH SEWING .....	19
BLIND HEM STITCHING .....	20
OVERCASTING-OVERLOCKING .....	21
SATIN, DECORATIVE AND LETTER STITCH SEWING .....	22
STITCH MEMORY .....	23
BUTTONHOLE SEWING .....	26
BUTTONHOLE MEMORY SEWING .....	27
THREE-STITCH ZIGZAG .....	28
SEWING ZIPPERS .....	28
SCALLOP STITCH .....	29
BAR TACKING .....	29
ADJUSTING THE FORWARD AND REVERSE STITCHES .....	30
MAINTENANCE .....	30
HELPFUL HINTS .....	32

## MAIN PARTS

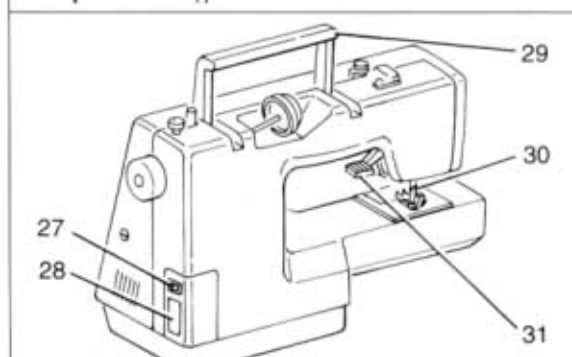
1. Upper Thread Guide
2. Bobbin Winder Tension Disc
3. Thread Take-Up Lever
4. Upper Thread Tension Regulator
5. Needle Up-down Button
6. Reverse Stitch Button
7. Extension Table
8. Stitch Selection Panel
9. Operating Panel
10. Spool Pin
11. Bobbin Winder Spindle
12. Bobbin Winder Stop
13. Flywheel
14. Forward-reverse Adjusting Screw
15. Foot Control



16. Needle Threader Lever
17. Needle Threader
18. Presser Foot Holder
19. Presser Foot Thumb Screw
20. Presser Foot
21. Lower Thread Guide
22. Needle Clamp Screw
23. Needle Bar Thread Guide
24. Needle
25. Needle Plate
26. Bobbin Cover Plate

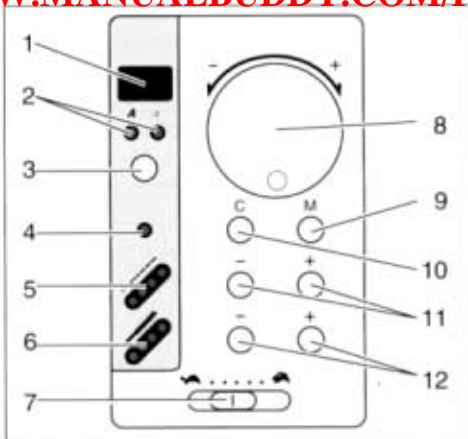


27. Mains Switch
28. Terminal Box
29. Carrying Handle
30. Thread Cutter
31. Presser Foot Lever



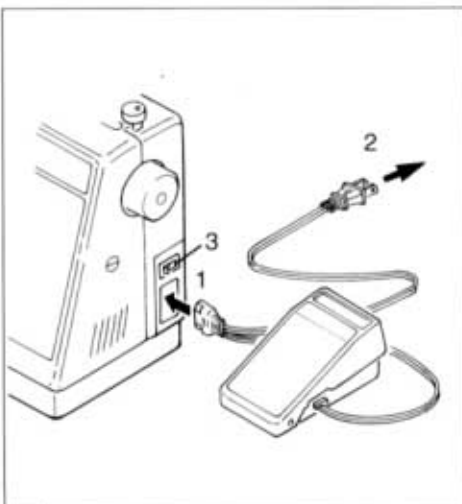
## CONTROL PANEL

1. Stitch Pattern Number Indicator
2. Style Indicator
3. Style Change Button
4. Stitch Memory Indicator
5. Stitch Length Indicator
6. Stitch Width Indicator
7. Speed Control Button
8. Stitch Selection Dial
9. Stitch Memory Button
10. Stitch Memory Clear Button
11. Stitch Length Buttons
12. Stitch Width Buttons



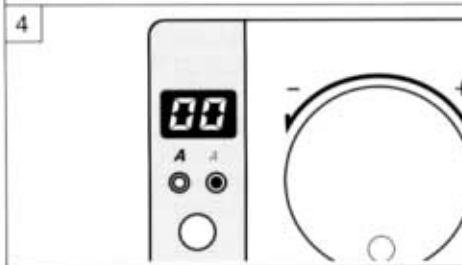
## ELECTRICAL CONNECTION

1. Connect foot control to the machine by inserting the 4-hole plug over the four prongs on the side of the sewing machine head.
2. Connect the mains lead plug to an electric outlet.
3. On the right side of the machine, above the terminal box, there is a mains switch. Your machine will not operate unless this switch is turned on.
4. When the switch is on, the stitching area lights up and needle bar automatically shifts back and forth, adjusting for straight stitching. "00" will appear in the Stitch Number Indicator and left light of the Style Indicator will light on.



## FOOT CONTROL

This foot control was designed exclusively for this model, and is not to be used on any other sewing machine, nor should any other foot control be connected to this model. Place the foot control on the floor where you can reach it easily with your foot. The harder (more pressure) the foot control is pressed, the faster the machine runs.



## CAUTION:

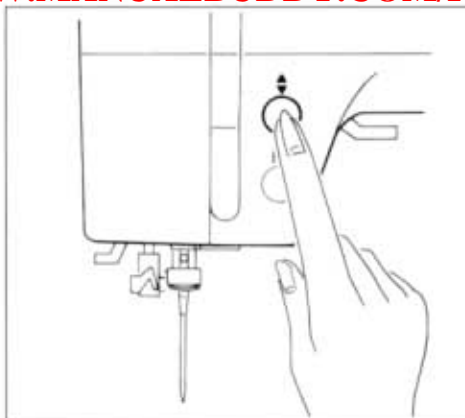
1. When the machine is not in use or when cleaning the machine, remove the mains lead plug from the electric outlet.
2. Always attach foot control to the machine before plugging it into an electric outlet.
3. Before you connect the cord to an outlet, turn off the mains switch to prevent accidents.



## NEEDLE UP-DOWN POSITION

The needle position is changed up or down by touching the Needle Up-down Button.  
Touch this button once, needle insert into fabric.  
Touch again, needle raise highest position.

It is used when pivoting, machine embroidering and sewing long continuous seams.

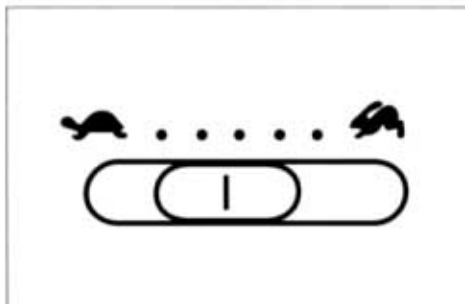


## SPEED CONTROL BUTTON

The speed of the machine is controlled by the pressure exerted on the foot control. And the maximum speed of the machine is controlled by the speed control button.

When you slide the speed control button to the right, the maximum speed becomes faster.

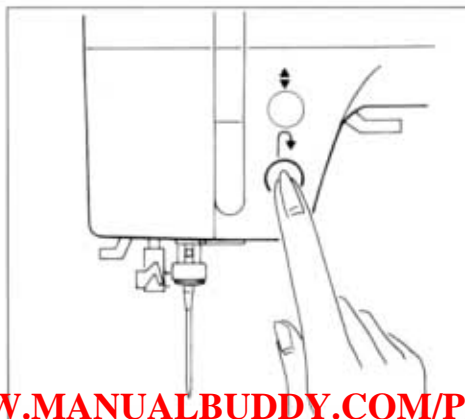
If you slide the lever to the left, the maximum speed becomes slower even though the foot control is pressed completely.



## REVERSE STITCHING

Fabric normally moves from front to rear (away from the operator) when sewing.

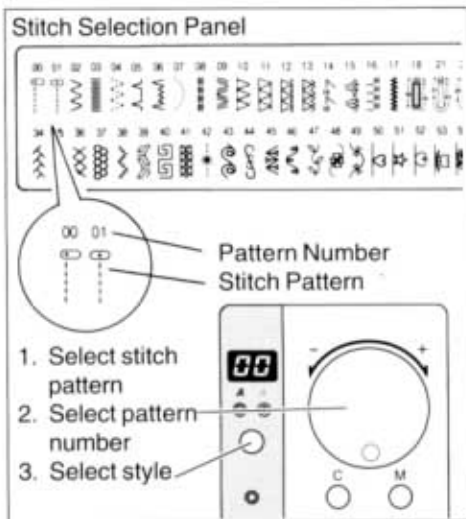
To sew in reverse, as for tacking ends of seams, press the reverse stitch button. Machine will feed fabric in reverse as long as button is being pressed.



All stitch patterns are indicated in the stitch selection panel on the front of machine. Each stitch pattern is given two digit numbers from "00" to "99". The pattern number lights up on the stitch pattern number indicator. You can select any pattern number by turning the stitch selection dial.

The letter stitches (62-99) are having 2 styles. Style is changed by touching the style change button.

1. Select pattern number of desired stitch from stitch selection panel.
2. Turn the stitch selection dial left or right until desired number is indicated in the pattern number indicator.
3. If selected stitch was letter stitch (62-99), select letter style by touching the style change button. Touching this button, the style changes alternately. The selected style indicator light will turn on.



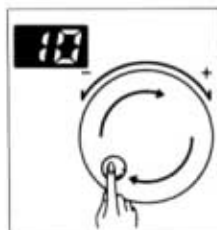
#### Note:

1. Numbers over "99" can not be selected.
2. When a pattern is selected, the preset length and width suitable for that pattern will appear.
3. Stitch selection cannot be made while sewing or winding the bobbin.

#### EXAMPLES

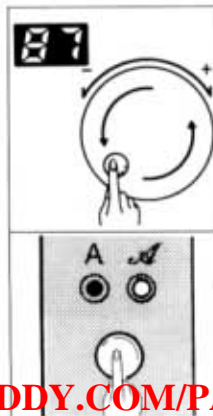
##### a. To select No.10(⌘) from No. 00.

1. Turn the stitch selection dial clockwise.



##### b. To select letter No.87(X) from No.10.

1. Turn the stitch selection dial counter-clockwise. (Number will change from 00 to 99.)
2. Select the letter style by touching the style change button.

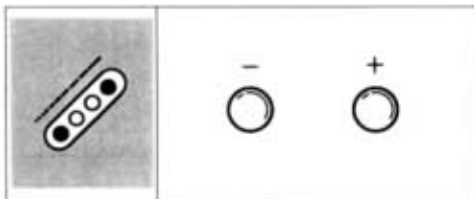


## SETTING STITCH LENGTH AND WIDTH

The stitch length and width has automatically been preset to a standard length and width depending on pattern selected. You may, however, adjust the stitch length and width by touching the stitch length buttons and stitch width buttons to a desired length and width. Each setting can be changed seven steps.

### STITCH LENGTH

For a shorter stitch, touch the (-) button.  
For a longer stitch, touch the (+) button.  
Firm, closely woven fabrics require a shorter stitch while loosely woven fabrics sew best with a longer stitch. Thicker or bulky fabrics also require a longer stitch.

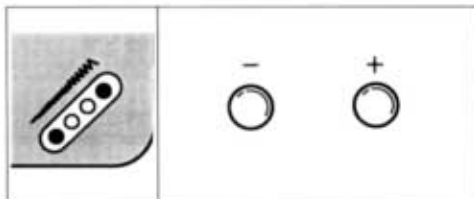


### STITCH WIDTH

For a narrower stitch, touch the (-) button.  
For a wider stitch, touch the (+) button.

#### Note:

Straight stitches (00, 01, 08) can be changed needle position left or right by touching the stitch width button. (See Page 18)



### INDICATOR LIGHTS

The four lights of each setting will indicate the seven steps as the chart below

INDICATOR LIGHTS	1	2	3	4	5	6	7
STITCH LENGTH							
STITCH WIDTH							

#### Stitch length changed:



#### Stitch width changed:



#### Both changed:





Your free-arm sewing machine is designed with an exclusive 2-in-1 sewing surface. For all regular sewing, it's a flat bed machine. Then by simply removing the extension table, it becomes a free-arm machine, making hard to reach areas readily accessible.

Here are some of the many uses for your free-arm sewing machine:

- Mending and repairing tubular items.
- Darning socks.
- Blind hem stitching on cuffs.
- Button and buttonhole sewing on sleeves.
- Embroidery and topstitching on cuffs and sleeves.
- Doll or child-size clothes.
- Any hard-to-reach areas.

All of the features of flat bed sewing are now available to you on a free-arm machine allowing you more versatility than ever before.

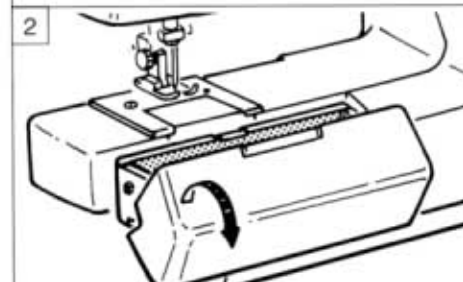
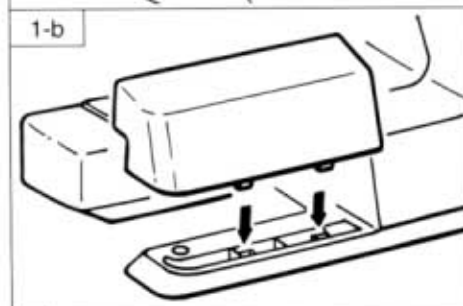
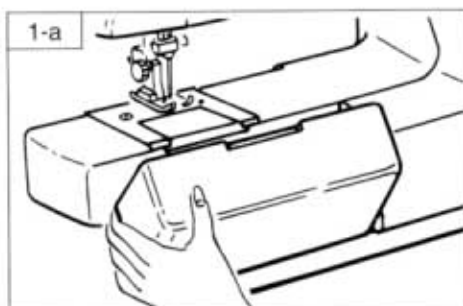
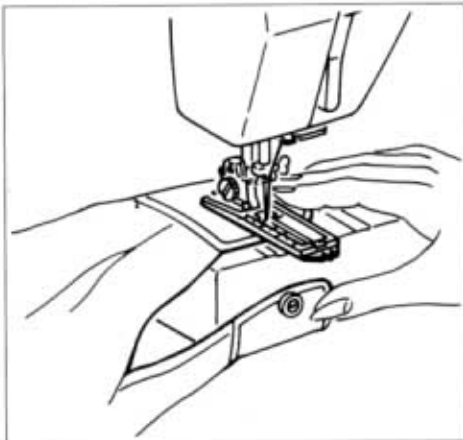
## 1. REMOVING THE EXTENSION TABLE

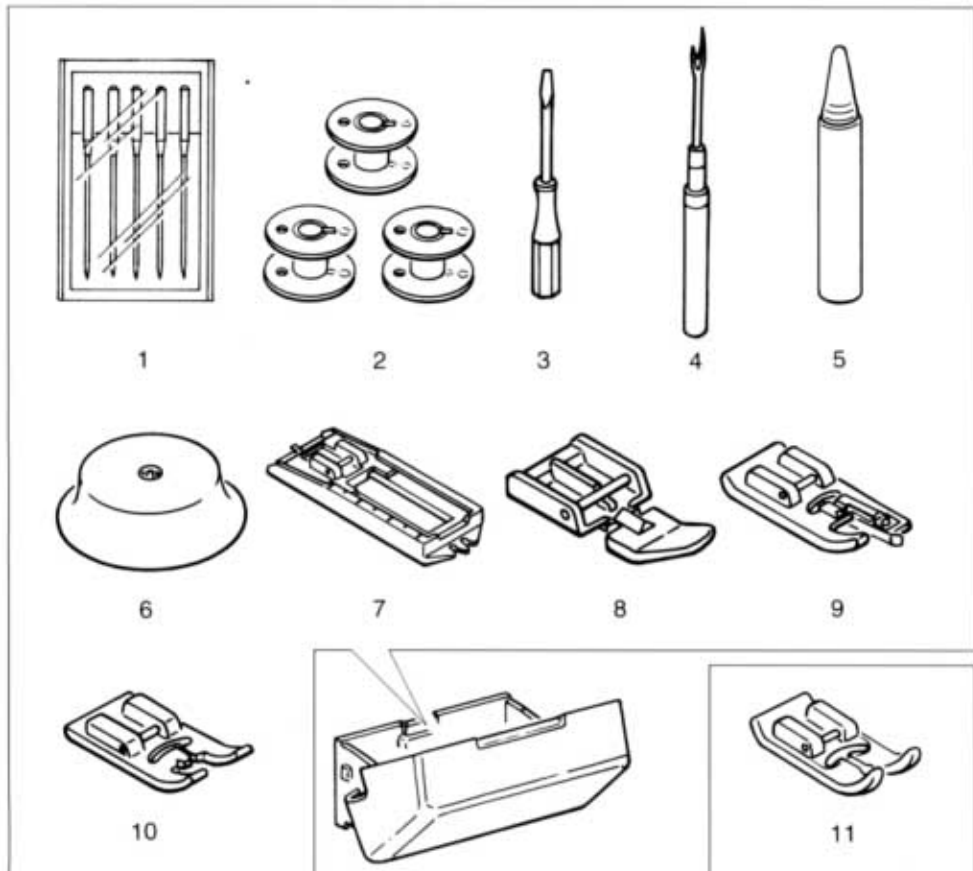
- a. To remove the extension table, lift the left side of the case and take away.
- b. To attach, set the studs into the holes of the machine base and press down.

## 2. OPENING THE ACCESSORY STORAGE

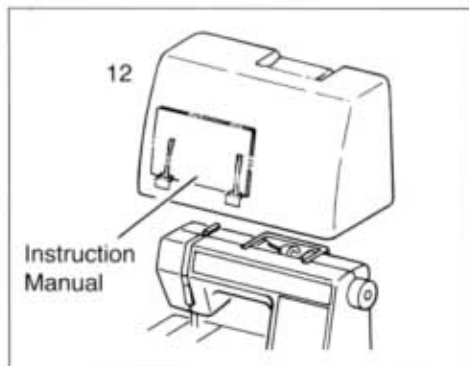
The area inside of the extension table contains the accessories.

To open the accessory storage area, lift up on the top left side of the table and pull towards you.



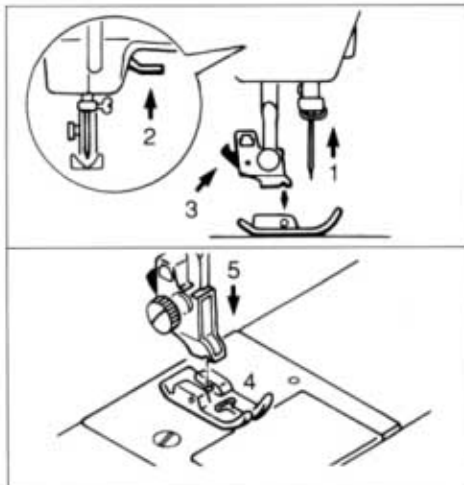


1. Needle Assortment
2. 3 Bobbins
3. Screwdriver
4. Seam Ripper
5. Oiler
6. Spool Cap
7. Buttonhole Foot
8. Zipper Foot
9. Overcasting Foot
10. Satin Stitch Foot
11. Ordinary Sewing Foot  
(This foot is in place on the machine)
12. Dust Cover  
(Manual holder is provided)



The presser foot must be changed according to the stitch you sew, or work you do.

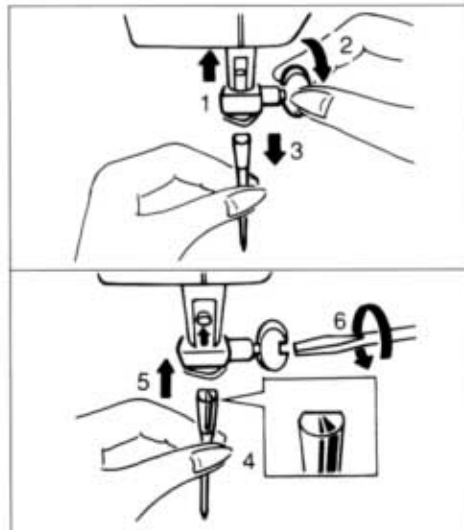
1. Turn the flywheel towards you until the needle is at its highest point.
2. Raise the presser foot lever.
3. Remove the presser foot by pushing the presser foot release lever toward you.
4. Put the foot required in place below the presser foot holder so that the pin on the foot is directly under the space between the presser foot holder bracket and spring.
5. Lower the presser foot lever and the presser foot will snap into place.



## INSERTING THE NEEDLE

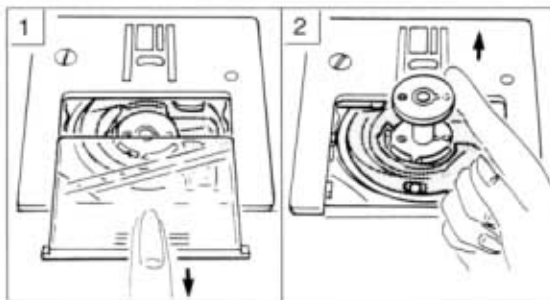
Select a needle of the right type and size for the fabric to be sewn (See page 17).

1. Turn the flywheel towards you until the needle is at its highest point.
2. Loosen the needle clamp screw.
3. Remove the needle.
4. Hold the needle with its flat part against the index finger, facing the back of machine.
5. Push the needle into the needle clamp, as far as it will go.
6. Tighten the needle clamp screw.



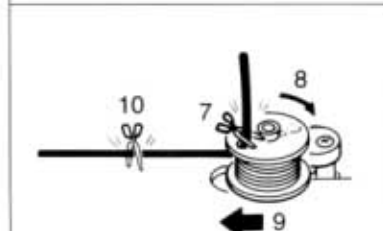
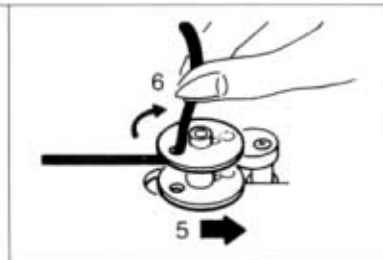
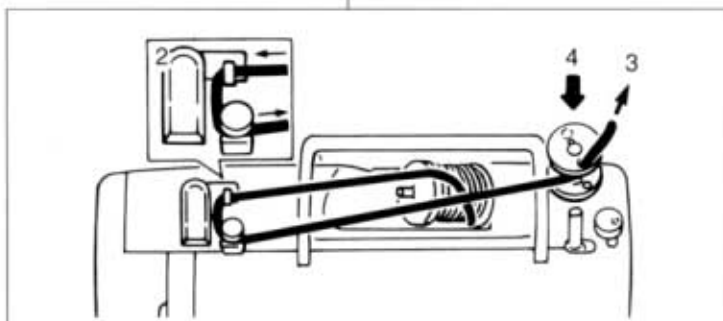
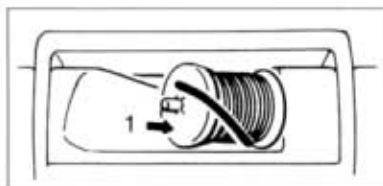
## REMOVING THE BOBBIN FROM MACHINE

1. Remove the bobbin cover plate by sliding it towards you.
2. Lift up the bobbin from the machine.



## WINDING THE BOBBIN

1. Place a spool of thread onto spool pin and set the spool cap on it.
2. Bring thread to the left and pass through the thread guide and the bobbin winder tension disc. Bring thread to the right.
3. Insert thread through a hole on the upper side of the bobbin from inside-out.
4. Place the bobbin on bobbin winder spindle.
5. Push the spindle towards the bobbin winder stop, to engage the bobbin winding mechanism.
6. Hold the end of the thread and press on the foot control to start the machine.
7. After the bobbin winds a few turns, stop the machine and cut the thread near the hole.
8. Start the machine again.  
The bobbin winder will stop by itself when the bobbin is full.
9. Push the bobbin and spindle to the left.
10. Remove the bobbin from the spindle and cut the thread.

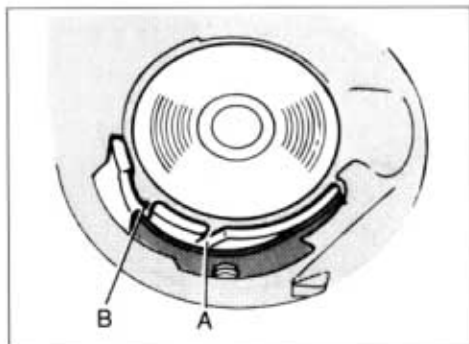


## INSERTING THE BOBBIN

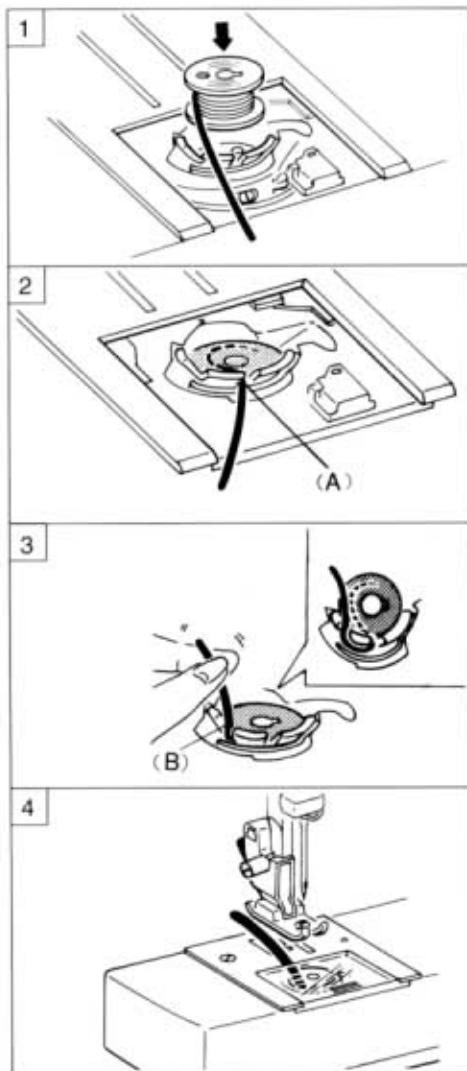
1. Place the bobbin into the bobbin holder with the thread running counter-clockwise.

2. Draw the thread into the notch (A).

3. Draw the thread clockwise until it slips into the notch (B).



4. Pull the thread about 15 cm (6") from the bobbin and attach the bobbin cover plate.





There is only one correct way to thread your machine for sewing.

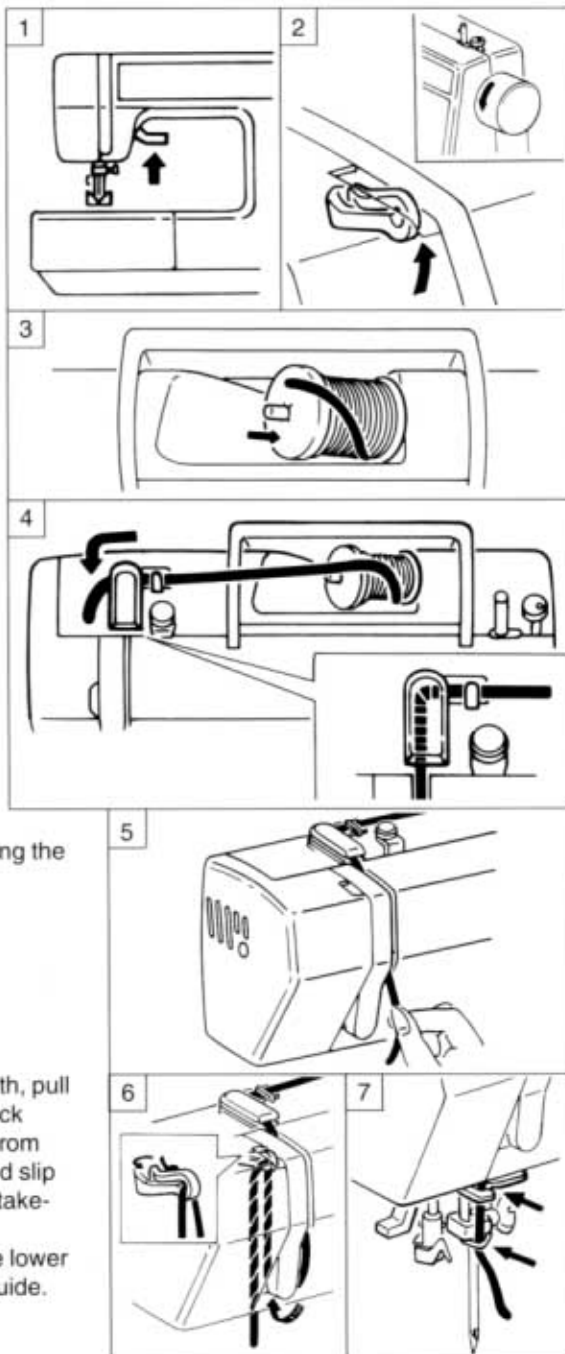
1. Raise the presser foot lever.
2. Turn the flywheel towards you to raise the thread take-up lever to its highest point.
3. Place a spool of thread onto spool pin and set the spool cap as shown.

4. Bring thread to the left and pass through thread guide and under the tension disc.

5. Pull the thread directly forward along the slotted threading path.

6. Following the slotted threading path, pull the thread down to the thread check spring (inside) and lead it across from right to left. Pull thread upward and slip into the slotted hole of the thread take-up lever from right to left.

7. Draw the thread down through the lower thread guide, needle bar thread guide.

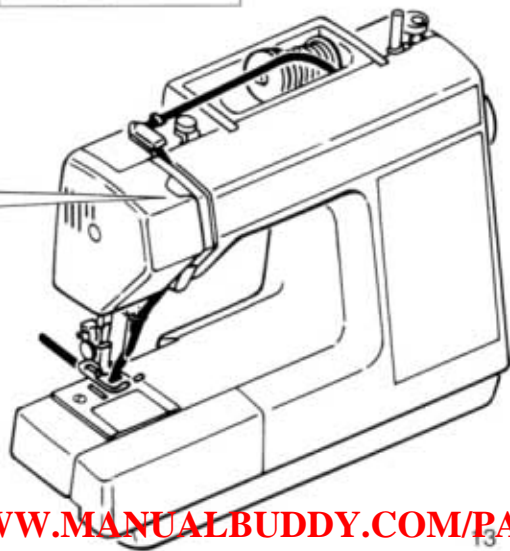
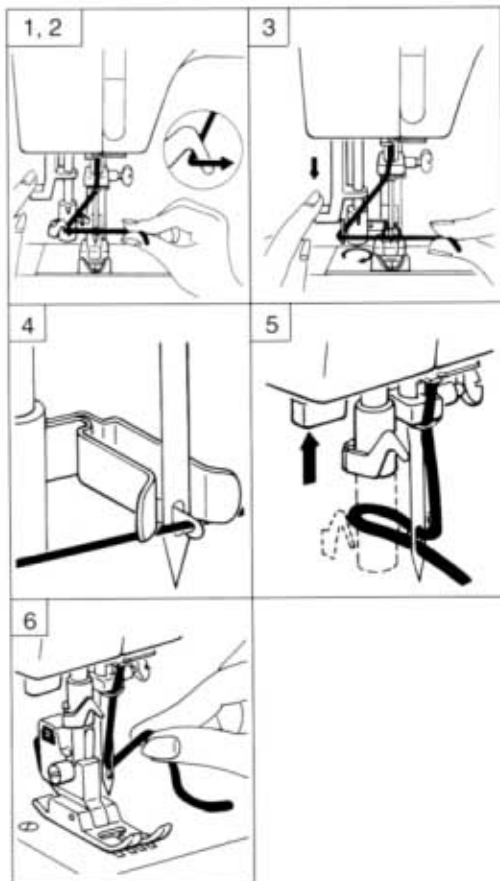


## THREADING THE NEEDLE EYE

1. Lower the presser foot.
2. Lower the threader lever.  
Stop when threader begins to turn.  
Hold lever in this position. Hook thread onto the thread guide and pull it toward right.
3. Lower lever the rest of the way down.  
Threader will make a half turn and the tip of the hook will enter the needle eye.
4. Slide thread along lower side of hook guard.  
Make sure the thread catches onto the hook.
5. Hold thread loosely while slowly lifting the threader lever. The thread will pass through the needle eye and threader will return to original position.
6. Pull thread out behind needle about 10cm (3") out of needle eye.

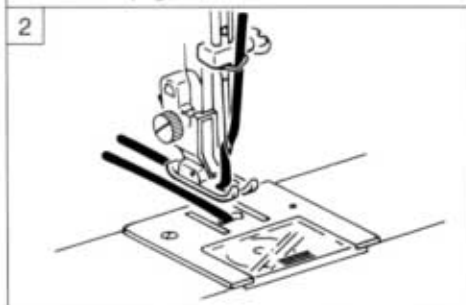
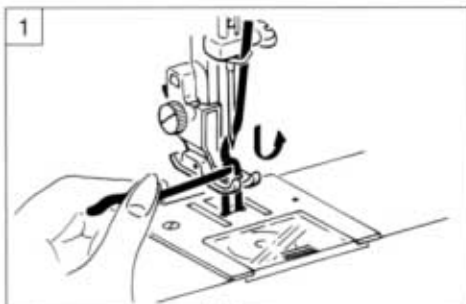
### Note:

1. Do not lower needle threader lever while machine is operating.
2. The needle threader is used for needles sized 11, 14, and 16 only.



## DRAWING UP THE LOWER THREAD

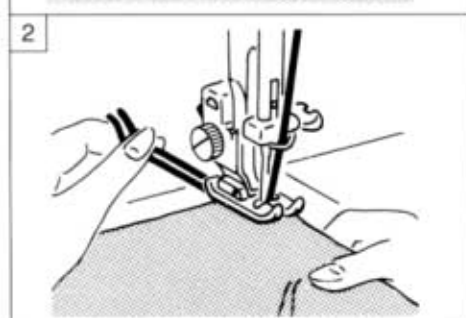
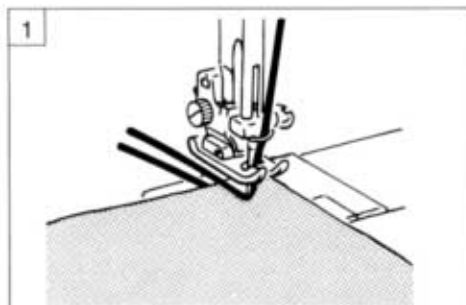
1. Raise the presser foot lever.  
Hold the upper thread loosely in left hand and turn the flywheel towards you one complete turn, with right hand. Draw the end of the lower thread up through the hole in the needle plate by pulling the upper thread. Pull the end of the lower thread out of the needle plate.
2. Lead about 10 cm (3") of both thread under presser foot, towards the rear of the machine.



## STARTING TO SEW

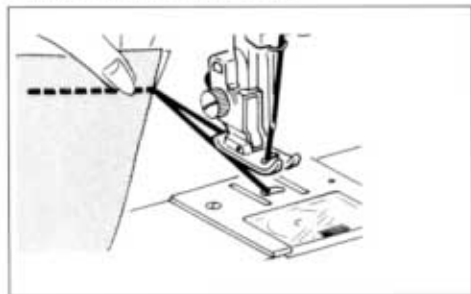
When you have followed the steps outlined so far, your machine is threaded and ready to sew. However, before actually working on your garment, use a scrap of the fabric you will be sewing to test the stitching. Some adjustment in stitch length or tension may be required.

1. Place a double thickness of fabric under the presser foot, lower the needle into the fabric by turning the flywheel towards you, and lower the foot.
2. Always hold back both threads when starting to sew for the first few stitches, in order to avoid jamming the machine.
3. Press the foot control, and start to sew. The speed at which the machine runs depends on the amount of pressure placed on the foot control.
4. Guide the fabric gently with your hand, but never pull or hold it against the normal feeding.

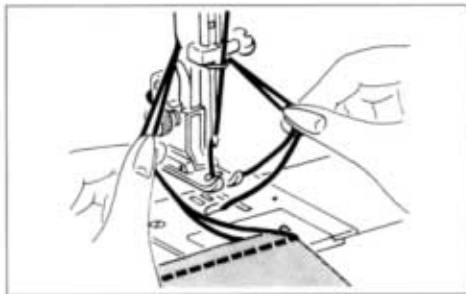


## REMOVING THE WORK

When you stop the machine to remove the work, have needle at its highest point. Avoid sewing off end of the fabric.



1. Raise the presser foot and draw the fabric out to the back and to the left.



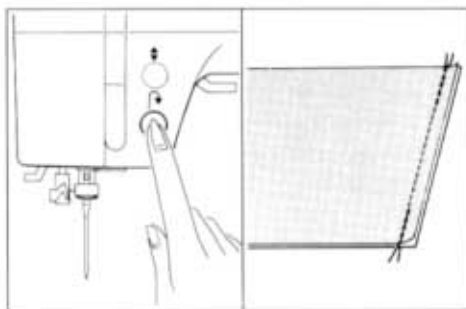
2. Cut the threads by passing them over the thread cutter and pulling down on threads.

## FASTENING OFF THE ENDS OF SEAMS

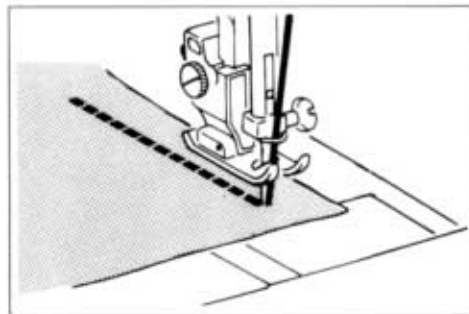
To reinforce the starting ends of a seam, position the needle in the fabric about 1 cm (1/2") from the starting point and lower the presser foot.

Touch the reverse stitch button and hold while backstitching to the edge of the fabric.

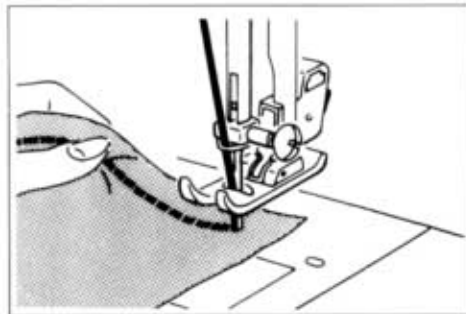
Release the button and sew the seam. When you reach the end, again touch the reverse stitch button and backstitch for about 1 cm (1/2").



## TURNING CORNERS



1. Stop the machine.  
Touch the needle up-down button to lower the needle into the fabric.



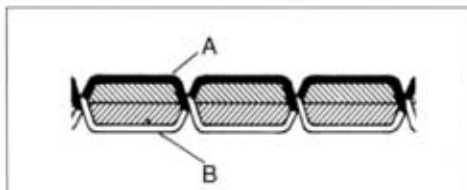
2. Using the needle as a pivot, turn the fabric.  
Lower the presser foot and continue sewing.

The thread tension must be properly balanced. If adjustment is required, it can be made normally by changing the upper thread tension.

### CORRECT THREAD TENSION

Upper and lower threads locked in the center of the seam.

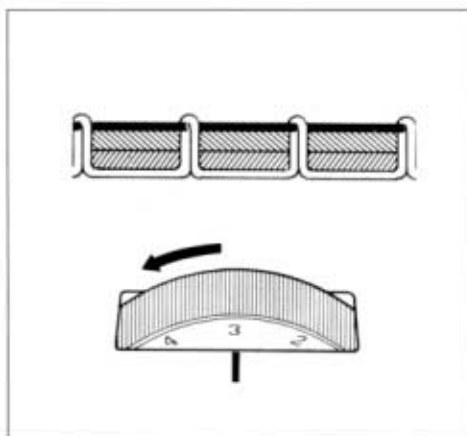
(A:Upper Thread B:Lower Thread)



### UPPER THREAD TENSION TOO TIGHT

The lower thread appears on the top side of the fabric.

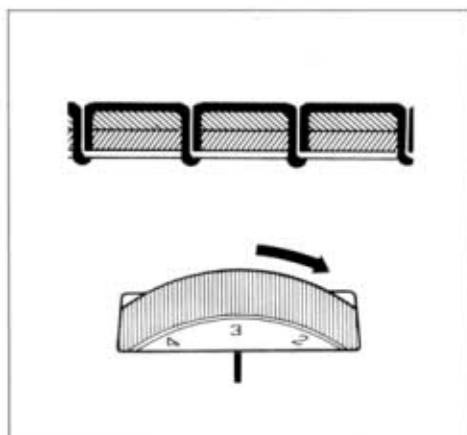
TO DECREASE THE UPPER THREAD TENSION, lower the presser foot and turn the tension dial to a lower number.



### UPPER THREAD TENSION TOO LOOSE

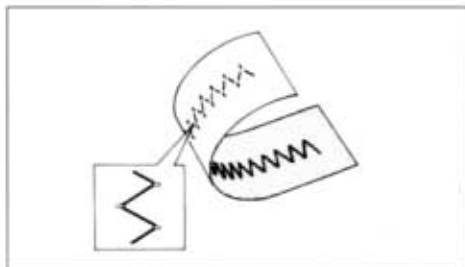
The upper thread appears on the bottom side of the fabric.

TO INCREASE THE UPPER THREAD TENSION, lower the presser foot and turn the tension dial to a higher number.





For zigzag stitch, the correct tension is that the upper thread appears slightly on the bottom side.

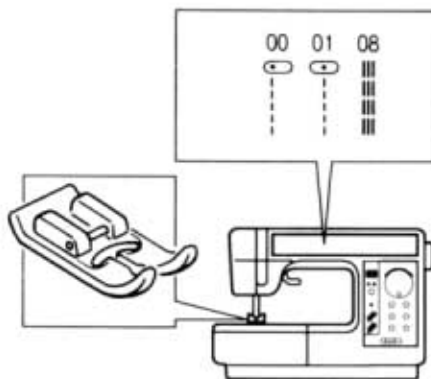


## SELECTING NEEDLES

Size and Grades of Needles		Type of Fabric and Work to be Done
US size 15x1	European 705	
10	70	Delicate fabrics such as georgette, chiffon, batiste, fine lace, linen and other sheer fabrics. For fine lingerie, infants' clothes and fine lace work.
12	80	Medium light-weight and summer-time fabrics, for house dresses, washable cotton dresses, curtains, children's dresses.
14	90	Dress silks and cottons, light weight woollens, furnishing fabrics. For general household sewing, men's fine shirts, smocks and fabric decoration. Heavy cretonne, madras, muslin, and quilts. For men's working shirts, and furnishing fabrics.
18	110	Heavy woven coating fabrics, light weight canvas, bed ticking, upholstery and awning material slip covers.
20	120	Heavy woven suiting and coating fabrics, duck, ticking, drill, canvas and sacking. For bags, canvas, coarse clothes and heavy goods.

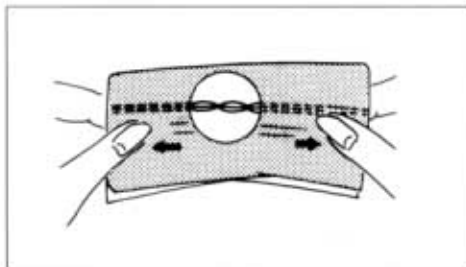
Special needles are available for sewing leather, denim and stretch fabrics.

The straight stitch is the most frequently used and simplest seam to sew. Set a stitch length suitable for the fabric.



### STRAIGHT STRETCH STITCH

When you sew to the stretch fabrics or want to sew stronger seams, set stitch selector to straight stretch stitch (08).

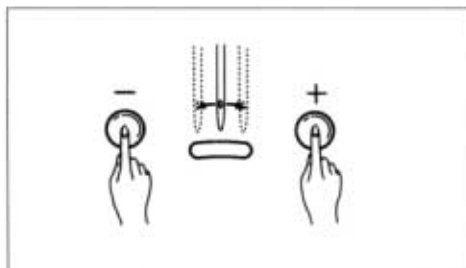


### LEFT-RIGHT NEEDLE POSITION

The straight stitch patterns (00, 01, 08) can be adjusted the needle position left or right by touching the stitch width buttons.

Touching the (-) button, needle moves to the left.

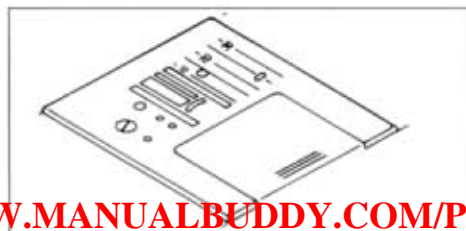
Touching the (+) button, needle moves to the right.



When sewing sheer or lightweight fabric, set needle position to left.

### SEAM GUIDELINES

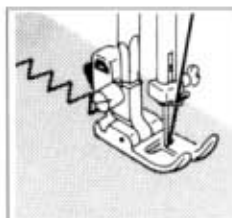
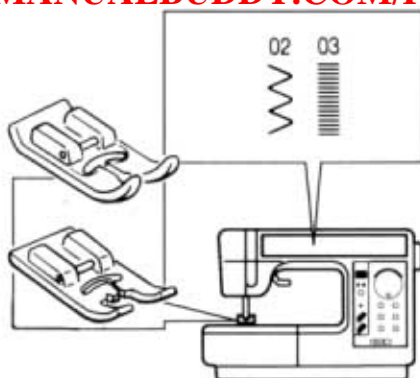
The seam guidelines are marked on the needle plate. They are convenient for measuring the seam allowance.



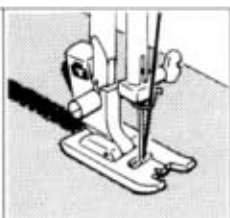
Your machine can sew zigzag stitches of various widths and lengths by changing the settings of the stitch width and stitch length.

### SATIN STITCHING

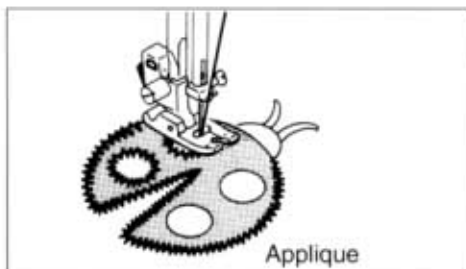
When machine is set to satin stitch (03), it will preset to closer stitches than the normal zigzag stitch (02). Attach the satin stitch foot for this stitch (03).



Zigzag stitch



Satin Stitch



Applique

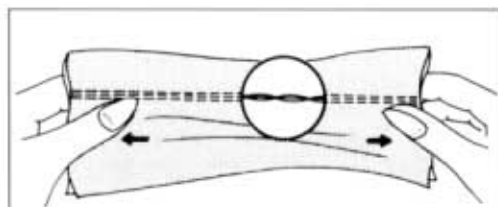
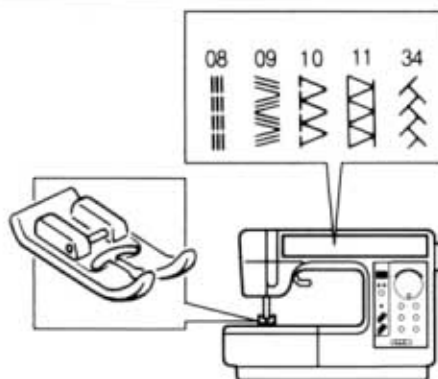
### ELASTIC STITCH SEWING

It assures you of a stitch that is strong and flexible and will give with the fabric without breaking.

Good for active sportswear or durable fabrics such as denim.

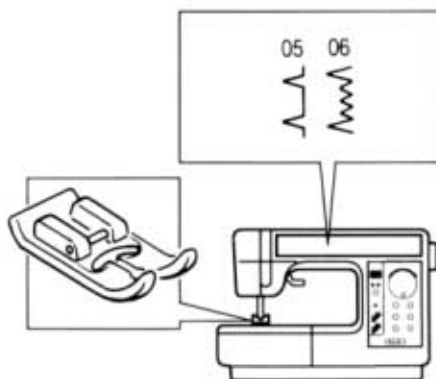
We recommend that you use a stretch needle when sewing stretch fabrics.

These elastic patterns are good for overcasting, joining two pieces of fabric, fagoting and sewing stretch fabrics.

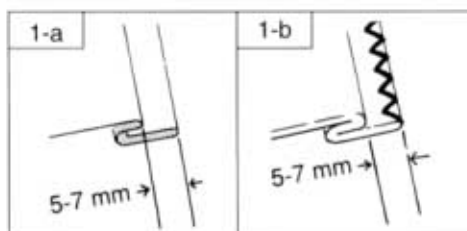


The blind stitch consists of four straight stitches and one zigzag stitch. It produces a durable hem which is almost invisible on the right side of the article sewn.

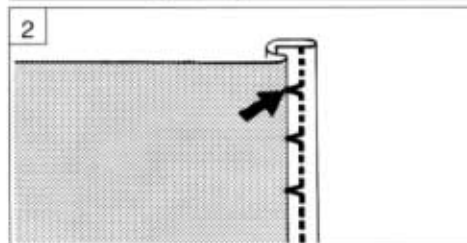
Stitch No. 06 is good for hemming stretch fabrics. All other settings are the same for both patterns.



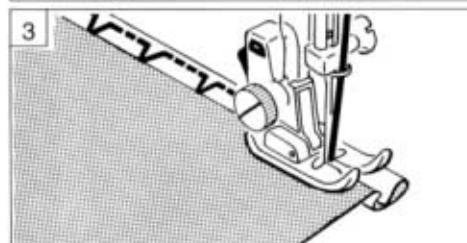
1. Fold over the hem against the right side of fabric according to the drawing with the top edge of the hem extending about 5-7 mm (1/4") to the right of the fabric (1-a: Light Weight Fabric, 1-b: Heavy Weight Fabric).



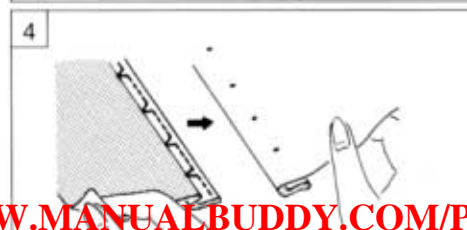
2. Put the fabric in place so that the straight stitches are on the protruding hem edge and the zigzag stitches just catch one thread of the folded edge.



3. Lower the presser foot and sew the hem, guiding fabric evenly.



4. When hemming is completed, unfold the fabric.



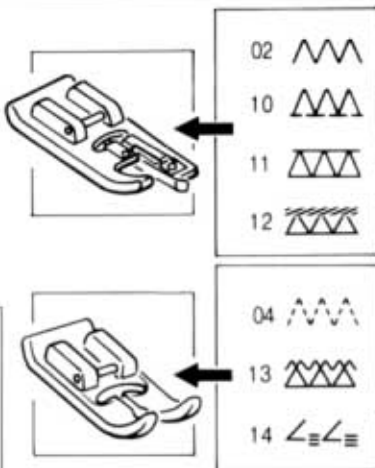
Seam edges which tend to ravel can be given a durable finish with machine overcasting.

### Using overcasting foot

Place the edge of the fabric next to the guide plate of overcasting foot.

#### Note:

Use the overcasting foot to the patterns No. 02, 10, 11, and 12 only. And do not change the seam width from preset width. Otherwise, needle will hit the foot and may break.



### METHOD 1:

Trim seam edges evenly and place stitching over raw edge. This type of seam finish is best for firmly woven fabrics.

#### Overedge stitch (10)

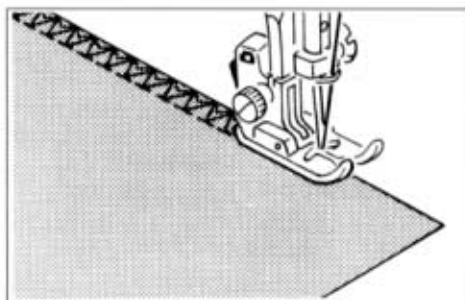
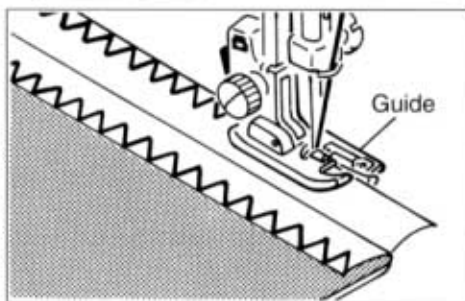
Pattern No. 10 can be used to simultaneously stitch and overcast seams in one step.

#### Overlock stitch (12)

This stitch finishes the edges of your seams similar to a commercial overlocking machine giving you that professional look.

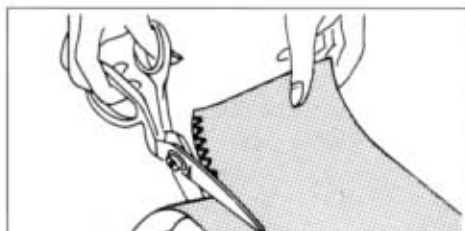
#### Double edge zigzag (13)

This stitch is excellent for the fabrics that tend to fray extensively such as linens and gabardines.



### METHOD 2:

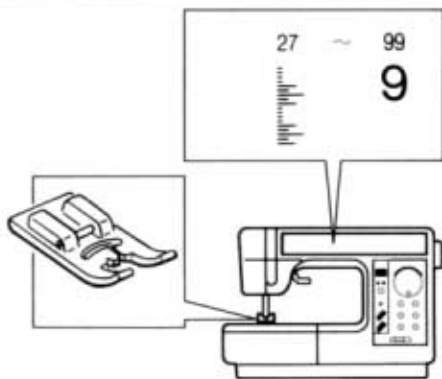
Place stitching near edge of seam allowance and trim away excess fabric after stitching. This type of seam finish is best for fabrics which fray easily, lightweight fabrics, and knit fabrics which will roll.



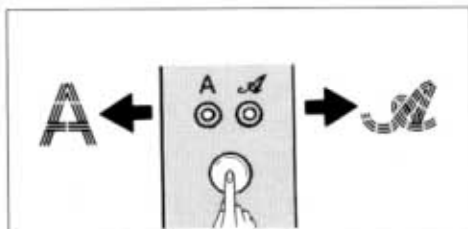


## SATIN, DECORATIVE AND LETTER STITCH SEWING

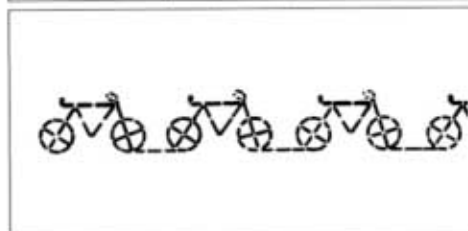
Use the satin stitch presser foot for satin stitching and sewing decorative stitch patterns as shown on the stitch selection panel. This foot has a full indentation on the underside to permit easy sewing over closely spaced zigzag stitches, and even feed of the fabric.



The letter stitches (62-99) have two styles. The style is changed alternately by touching the style change button. As the letter stitches have a built-in tack stitch at the end of each pattern, the machine will stop automatically after sewing each pattern.

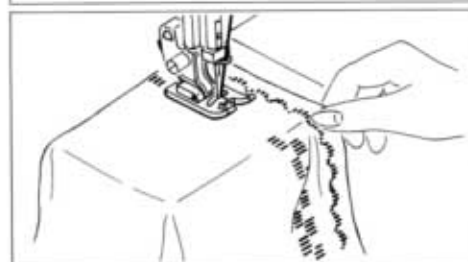


The other patterns don't have a built-in tack stitch, therefore the machine will repeat pattern sewing until you release the foot control.



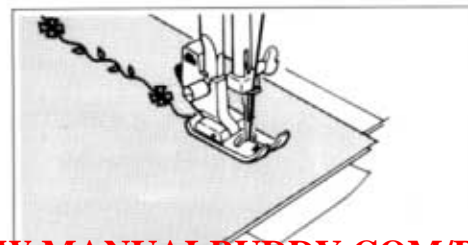
You can combine the decorative patterns easily by using the stitch memory functions. See next page "Stitch Memory"

To tailor the decorative pattern to the garment, you may narrow the width of the decorative pattern by touching the stitch width (-) button to a lower number as desired. To lengthen the pattern, touch stitch length button to a higher number. Experiment with fabric scraps until you get the desired length and width.



### SEWING THIN FABRICS

When sewing very thin fabrics, place a thin sheet of paper beneath the fabric while stitching. The paper can be easily torn away when sewing is completed.



## STITCH MEMORY

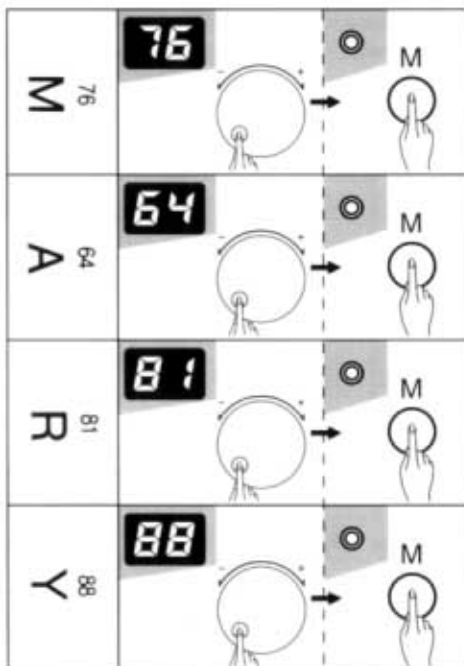
### ENTERING STITCHES INTO MEMORY

1. Select the stitch number you want by turning the stitch selection dial. The stitch number will appear on the stitch number indicator.
2. Adjust the stitch length and width to change the preset length and width if desired.
3. Touch the "M" button. The memory light will turn on indicating that one unit of the selected stitch is now entered into the memory.

Note: If you want to memorize one unit of the stitch two or more times, touch the "M" button two or more times. The memory light will blink each time.

4. Select the next number (The memory light will turn off) and enter it into the memory following the instructions given in steps 1 to 3.

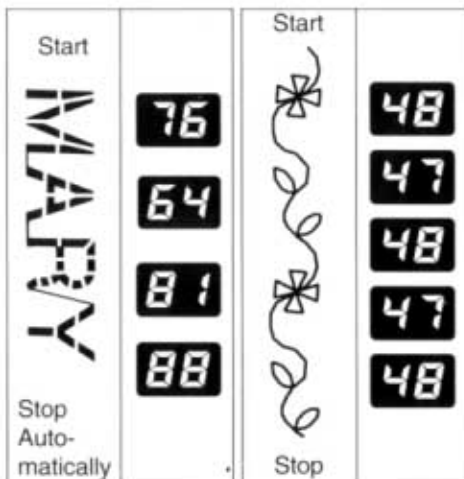
Note: You can change the style of memorized letters by touching the style changing button anytime.



### SEWING MEMORIZED STITCH PATTERNS

Attach the Satin Stitch Presser Foot when sewing memorized stitch patterns.

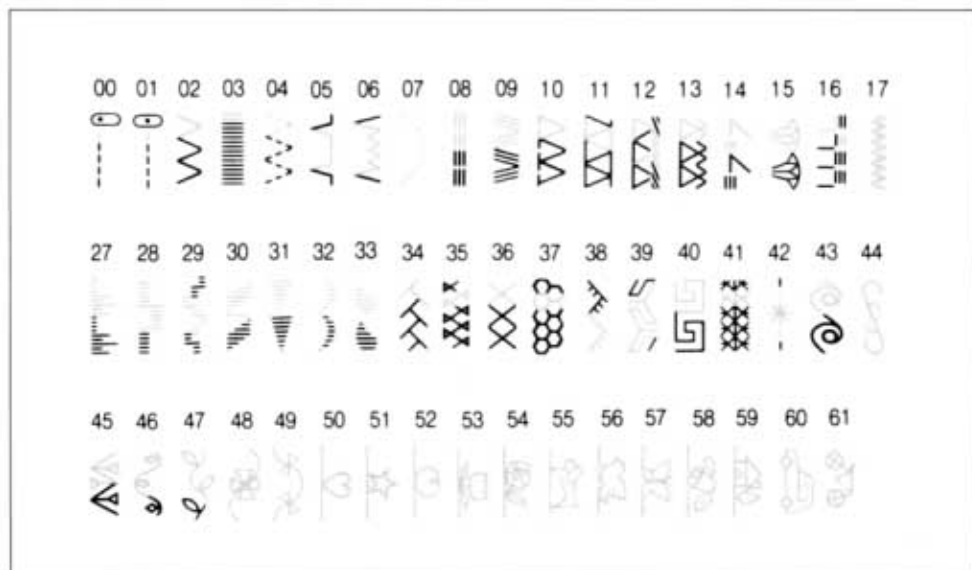
1. After you have entered the last stitch pattern by touching "M" button, press foot control and sew. Pattern numbers on the display will change in accordance with the pattern being sewn.
2. If the last stitch you have entered was the letter stitch (62-99), the machine will stop automatically after sewing the memorized stitches. And if a last stitch was not the letter stitch (62-99), the machine will continue to sew the stitches entered repeatedly until you stop the machine.



## ONE UNIT OF PATTERN

When you touched the "M" button once after selected pattern number, one unit of that pattern will be memorized. The portion marked grey on chart below shows one unit of that pattern.

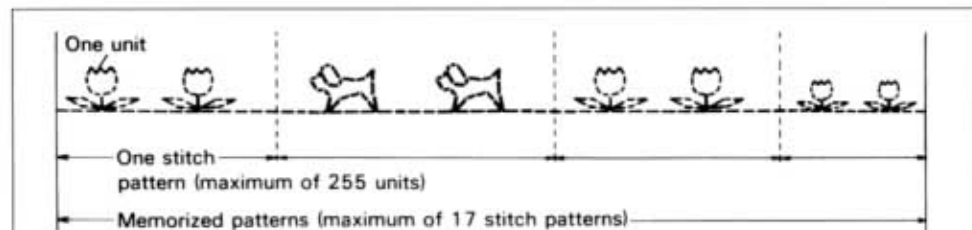
One unit of each letter stitch is one letter.



Note: Do not attempt to memorize buttonhole (18-26) together with other patterns because buttonholes will deform. To memorize buttonholes see page 26.

## THE LIMIT OF THE STITCH MEMORY

1. This machine will enter a maximum of 17 different stitch patterns.  
If 1 pattern is made in 2 different sizes it is counted as 2 patterns.
2. A maximum of 255 units of one stitch pattern can be entered by touching the "M" button 255 times.  
If you want to sew the same pattern consecutively 10 times, touch "M" button 10 times.



There are two methods to clear the memorized stitches by using the "C" button.

### 1. Clearing one unit

Touch the button "C" less than 0.5 sec.

The last unit entered has been cleared.

The pattern number indicator indicates the number one unit back.

Repeating this method, machine will clear the each entered unit from back. When all entered unit have been cleared, "00" will appear on the stitch pattern number indicator.

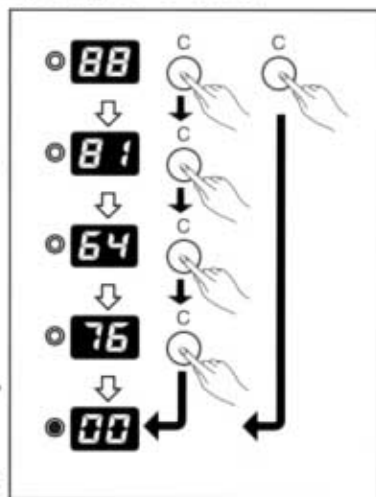
### 2. Clearing all memorized stitches

Touch the pad "C" over 0.5 sec..

All memorized stitch patterns have been cleared.

The stitch pattern number indicator will indicate "00" and automatically set to straight stitch.

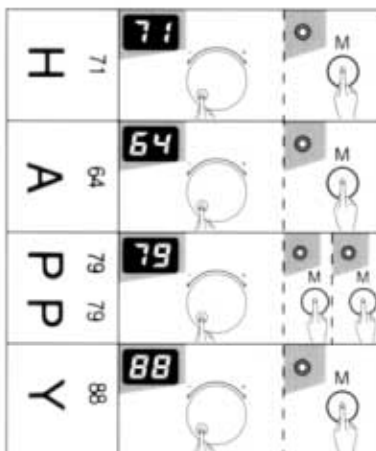
- Use this method when you completed desired stitch memory sewing or when you enter a new stitch pattern into memory.



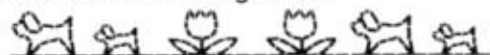
### EXAMPLES

#### Sew the word "HAPPY"

1. Select pattern number (71) and then touch the "M" button. (Memory light will turn on indicating that the pattern has been entered.)
2. Select pattern number (64) and then touch the "M" button.
3. Select pattern number (79) and then touch the "M" button two times.
4. Select pattern number (88) and then touch the "M" button. As this pattern has built-in tack stitch, the machine will stop automatically after sewing memorized stitches.



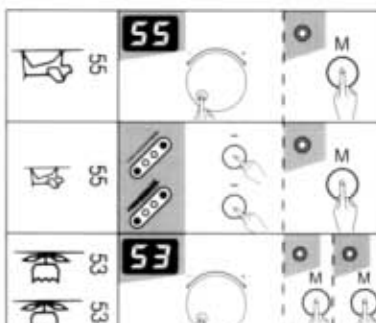
#### Sew border on child's garment



1. Select pattern number (55) and enter it by touching the "M" pad.
2. Each time you touch the "-" button for stitch length and stitch width, the pattern will become smaller. Touch "M" button.
3. Select pattern number (53). Touch the "M" button twice to enter two units of pattern.

The machine will continue to sew the patterns

and repeat the

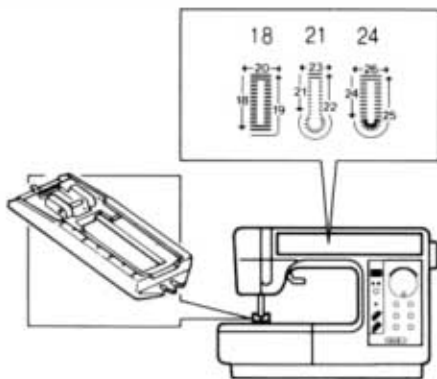




## BUTTONHOLE SEWING

The buttonhole foot is designed for maximum visibility and rides easily over the buttonhole stitching. A buttonhole consists of two parallel rows of satin stitches connected at the ends. Correct positioning of the fabric and accurate measuring and marking of the hole length are important in producing a professional-looking buttonhole. Fabric must be guided carefully so that lines of stitching will be straight and close together, but not touching.

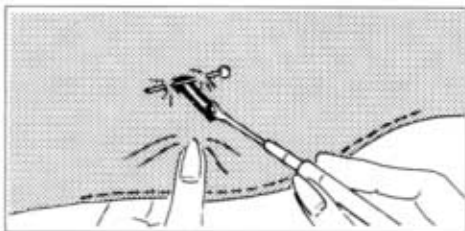
First, work a sample buttonhole in the same fabric as the garment. Use a double thickness of fabric, and include interfacing for stability. Adjust stitch length to make sure that you have the most suitable setting. This sewing machine will make three types of buttonholes, a bar-tack buttonhole (18-20), a keyhole buttonhole (21-23), and a round-tack buttonhole (24-26).



			<p>Mark position and length of buttonhole on fabric. Length of the hole is determined by the width and thickness of the button combined; the thicker the button, the longer the buttonhole.</p>
			<p>Set pattern No. 18 (or 21, 24) Position fabric under presser foot so that the center line mark is in the center of the buttonhole foot and the needle is directly above the start line mark. Pull the buttonhole foot all the way forward and lower the foot. Start the machine and sew a row of stitches on the left side. When you have reached the end mark, stop the machine.</p>
			<p>Set pattern No. 19 (or 22, 25) and start the machine. The machine will sew bottom bartack (or keyhole, round-tack) and then continue to sew a row of stitches on the right side. When you reach the start line mark, stop the machine.</p>
			<p>Set pattern No. 20 (or 23, 26) and start the machine. The machine will sew the bartack and stop automatically.</p>



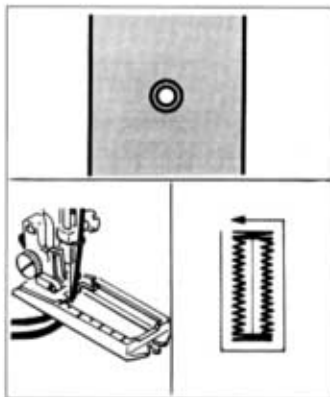
After buttonhole is sewn, draw upper thread through to underside, and knot upper and bobbin threads. Cut center of buttonhole with embroidery scissors or seam ripper, being careful not to cut stitching on either side.



## BUTTONHOLE MEMORY SEWING

This machine allows you to sew the same size buttonholes as many times as you sew.

1. Sew desired type and size buttonhole by following the instructions given on page 26. When you have sewn the last bartacking, the stitch memory indicator light will turn on. The machine is now ready to sew the memorized buttonhole.
2. Place fabric under the presser foot. Lower the presser foot and start to sew. The machine will sew the same size buttonhole which you memorized and will stop automatically after tacking the end of each buttonhole. The speed for sewing buttonholes must always be the same speed that was used for memorizing. When sewing is completed, touch the "C" button over 0.5 sec. until "00" appears on the stitch pattern number indicator.



### Note;

1. The type of fabric and thread, or layers of fabric must be exactly the same as that when memorizing. If this is not possible, sew each buttonhole individually, without use of the memory.
2. To clear buttonhole memory, touch the "C" button over 0.5 sec..
3. Stronger, more compact buttonholes can be made by adjusting stitch length to a shorter stitch or going around the buttonhole twice.

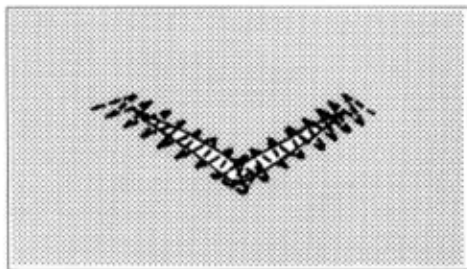
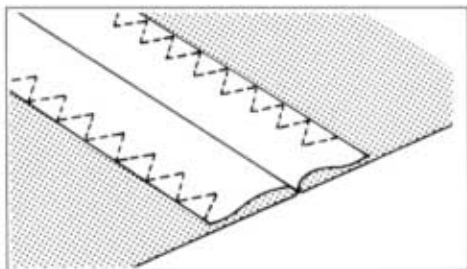
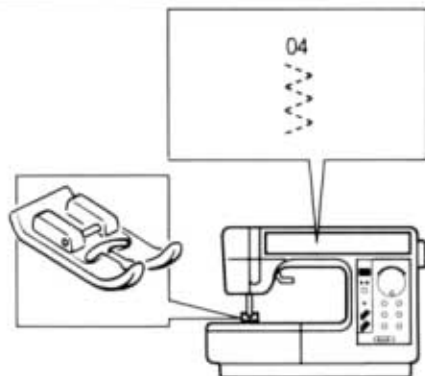
## THREE-STITCH ZIGZAG

### OVERCASTING

The three-stitch zigzag is used for overcasting knitted fabrics and mending tears.

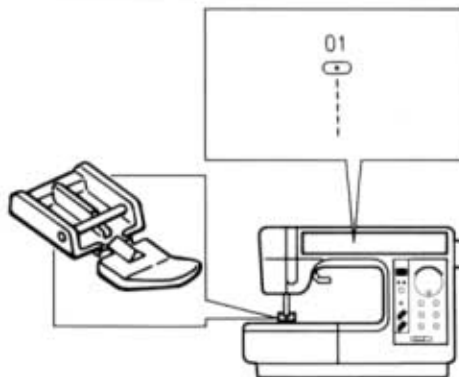
When mending a three-cornered tear sew from each end to the center.

For large tears, place piece of fabric under the tear as a reinforcement.

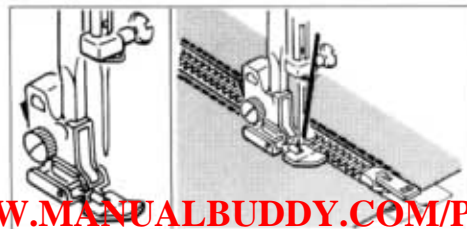
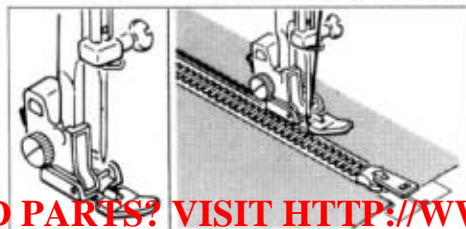


## SEWING ZIPPERS

1. Attach the left side of the presser foot pin to the presser foot holder when sewing on the right side of the zipper, and right side of the presser foot pin to the holder when sewing the left side of the zipper.
2. First, attach the left side of the presser foot pin to the presser foot holder and press the side of the foot against the zipper to sew the right side of the zipper. Next, attach the right side of the presser foot pin onto the holder and sew the left side of the zipper.



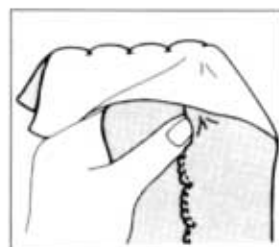
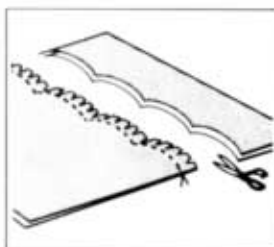
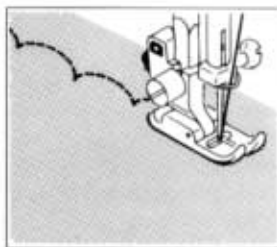
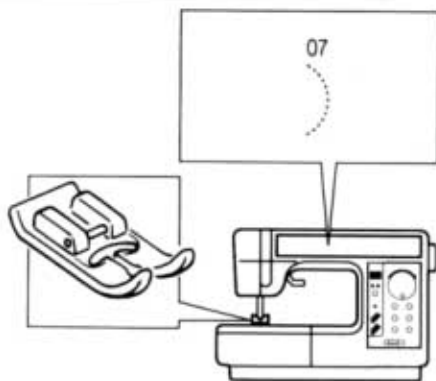
**Note:** Never change the Stitch pattern from No.01 and needle position from center, otherwise, needle hit the presser foot and may break.



## SCALLOP STITCH

This stitch is used to sew edge decorations on women and children's wear and table cloths.

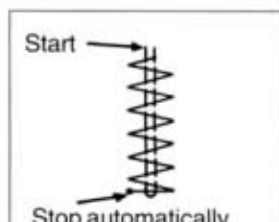
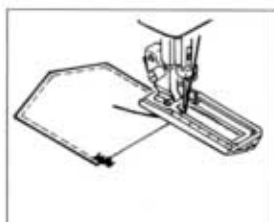
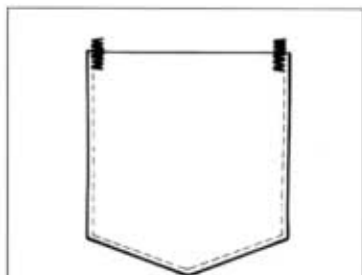
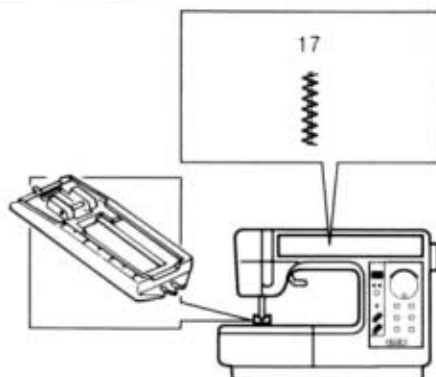
1. Fold the fabric right sides together in and sew along the edge.
2. Cut the fabric along the seam leaving an allowance of 3 mm for seaming. Notch the allowance.
3. Turn fabric over and push out the curved seam to the surface and press it.



## BAR TACKING

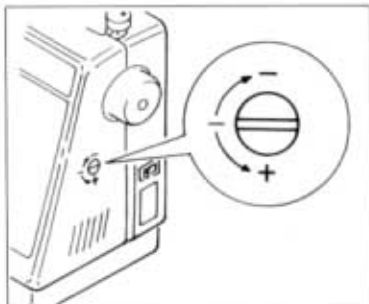
Pattern number 17 is a bartack stitch. Attach the buttonhole foot and sew the sample to adjust the length of bartacking.

1. Place fabric under the presser foot. Pull the buttonhole foot all the way forward and lower the foot.
2. Sew bartacking until machine stops automatically.



## ADJUSTING THE FORWARD AND REVERSE STITCHES

Depending on the type of fabric you sew, it may be necessary to adjust the forward and reverse stitches. This adjustment is needed when the buttonhole or the decorative stitch pattern is misformed. Turn screw which is located below the flywheel in either direction as may be required.

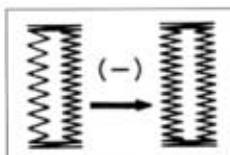


### CAUTION:

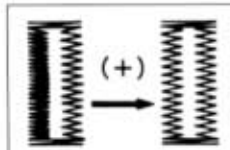
After you have finished the sewing, return the screw to "—" mark.

### BUTTONHOLE

1. If stitches are too loose on the left side, turn screw in direction of symbol (-).

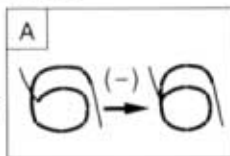


2. If stitches on the right side are too loose, turn screw in direction of symbol (+).

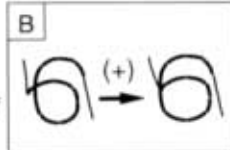


### ELASTIC STITCH PATTERN

1. If patterns are misformed as illustration (A), turn screw in direction of symbol (-).



2. If patterns are misformed as illustration (B), turn screw in direction of symbol (+).

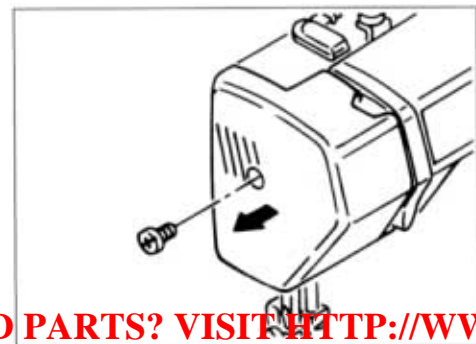


## MAINTENANCE

Disconnect the machine from the mains before carrying out any maintenance or changing the sewing light bulb.

### REMOVING THE LIGHT COVER

Remove the screw on the side of light cover. Slide the light cover to the left and remove it.

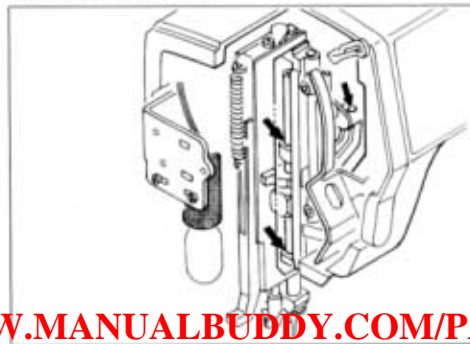


### CHANGING THE SEWING LIGHT

The sewing light is inside the light cover. To change the light bulb, remove the light cover.

### OILING

Remove the light cover and place one drop of oil on each oiling point indicated by arrows. Remove excess oil from parts that could possibly come in contact with the fabric and stain it.



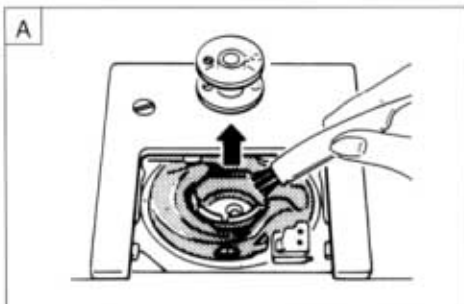


## CLEANING

If lint and bits of thread accumulate in the hook, this will interfere with the smooth operation of the machine. Check regularly and clean the stitching mechanism when necessary.

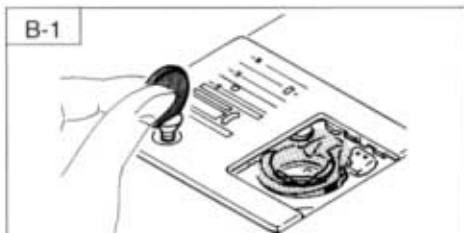
### A. BOBBIN HOLDER

Remove the bobbin cover plate and bobbin.  
Clean the bobbin holder with a brush.

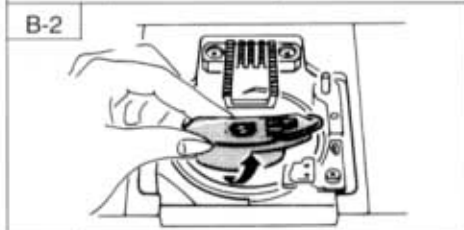


### B. HOOK RACE AND FEED DOG

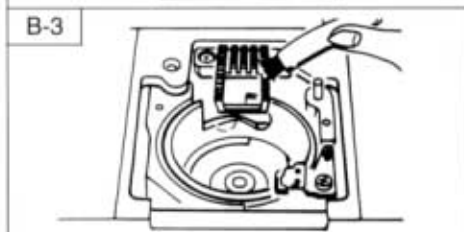
1. Remove the needle, presser foot and holder. Remove the bobbin cover plate and bobbin. Remove the screw holding the needle plate and remove the needle plate.



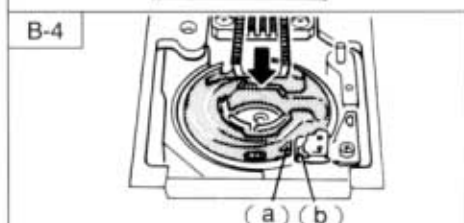
2. Lift up the bobbin holder and remove it.



3. Clean the hook race, feed dog and bobbin holder with a brush. Also clean them using a soft, dry cloth.



4. Replace the bobbin holder into the hook race so that the tip (a) fits to the stopper (b) as shown.





PROBLEM	CAUSE	CORRECTION
<b>Machine will not run</b>	Cord not plugged into electrical outlet. Mains switch is not turned on. Bobbin winder spindle is in right side.	Check plug. Turn on the switch. Push spindle to the left.
<b>Machine does not feed properly</b>	Presser foot not suitable for kind of work.	Use proper foot.
<b>Needle breaks</b>	Fabric pulled while sewing. Needle inserted incorrectly. Incorrect size needle or thread for fabric being sewn. Needle is hitting the presser foot.	Do not pull fabric. Re-insert needle. Choose correct size of needle & thread. Select correct foot and pattern.
<b>Upper thread breaks</b>	Needle inserted incorrectly. Needle eye has sharp edges. Tension on upper thread too tight. Machine not properly threaded. Thread of incorrect size or poor quality.	Re-insert needle. Insert new needle. Loosen upper thread tension. Re-thread machine. Choose correct thread.
<b>Lower thread breaks</b>	Bobbin threaded incorrectly. Bobbin wound unevenly or too full. Dirt or lint on the bobbin holder.	Re-thread the bobbin. Rewind the bobbin. Clean the holder.
<b>Machine skips stitches</b>	Bent or blunt needle. Needle inserted incorrectly. Incorrect size of needle.  <b>(on stretch fabric)</b>	Insert new needle. Re-insert needle. Choose correct size needle for fabric. (Use stretch needle)
<b>Fabric puckers</b>	Upper thread tension too tight. Fabric too sheer or too soft. Different type or size thread used on upper and lower thread. Bent or blunt needle.	Loosen upper thread tension. Use underlay of tissue paper. Use same thread on upper and lower thread. Insert new needle.
<b>Machine makes loose stitches or loops</b>	Tension not adjusted properly. Machine not properly threaded. Bobbin threaded incorrectly.	Check thread tension. Check threading. Re-thread the bobbin.
<b>Machine runs with difficulty</b>	Machine needs oiling. Dirt or lint in the bobbin holder.  Dirt or lint in the hook race and feed dog.	Oil the machine. Remove the bobbin cover plate and clean bobbin holder. Remove the needle plate and bobbin holder and clean the hook race and feed dog.