

Necchi Sewing Machine Sales Corp.
164 W. 25 Street New York 1, N. Y.



supplemental instructions
for use of

NECCHI-MATIC

Wonder Wheel



The
con. sewing machine
ever awarded the
U. S. TESTING COMPANY
SEAL OF APPROVAL for
quality, availability of
parts and service

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The NEW NECCHI BU MIRA Sewing Machine

This new style machine possesses several features which distinguish it from the already well-known NECCHI sewing machines made previously.

The MIRA BU machine is provided with a built-in sewing light which is located just above that portion of the machine where the needle stitches into the fabric. Moreover, it is equipped with a transformer (just below the motor) which makes it possible, by just actuating a "SPEED" switch, to run the machine at a considerably reduced *constant* speed for as long a time as is desired while the lever of the knee controls, or that of the foot control, is in a fully depressed position.

This feature will be welcomed by beginners in sewing who are not yet accustomed to the higher speeds of the machine, or by those who, while doing a special kind of work, find it convenient to operate the machine at a constant reduced speed for a greater length of time. By moving the "SPEED" switch in the opposite direction, the machine can be run at the highest possible speed while the lever of the motor control is in a fully depressed position. By depressing the lever of the motor control to lesser extents, the speed of the machine can be reduced as desired.

HOW TO RUN THE BU MIRA MACHINE

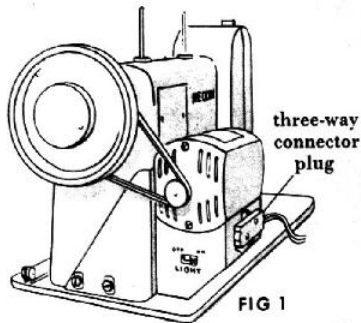


FIG 1

To operate this machine, which must be run with AC (Alternating Current) only, proceed as follows:

1. Insert the three-way connector plug *fully* into the corresponding opening of the transformer (see Fig. 1) and push the male plug at the end of the extension cord into the wall outlet.
2. Throw the "LIGHT" switch on the transformer (Fig. 1) to the "ON" position and leave it in this position while the machine is in use.

When the "LIGHT" switch is at the "ON" position, a red signal light (see Fig. 4) will

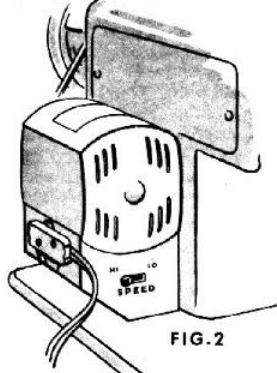


FIG. 2

appear at the lower portion of the face plate, indicating that the sewing machine is now under current. This red signal light will glow as long as the "LIGHT" switch is at the "ON" position.

3. See whether the "SPEED" switch on the transformer (see Fig. 2) is at the "HI" or "LO" position and throw this switch to the position which you desire.
4. Get the machine ready for sewing by bringing lower thread above the needle plate and place fabric to be sewn between presser foot and needle plate.
5. Move lever of motor control (knee control or foot control) until desired speed has been reached. When "SPEED" switch is on "LO",

the machine will only reach a certain reduced speed, even if motor control lever is fully depressed.

6. When you have finished your sewing work, throw the "LIGHT" switch to the "OFF" position. This will automatically disconnect the motor of the machine from the electric current.

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THREADING THE BU MIRA MACHINE

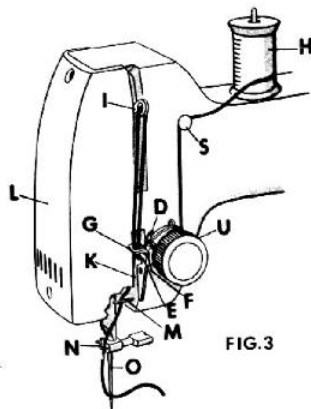


FIG. 3

When using the BU MIRA, disregard the threading instructions on pages 19 and 20 of the Instruction and Maintenance Guide.

To prevent breaking of the upper thread, it is essential to thread the machine as described below:

1. Bring needle to its highest position by turning balance wheel toward you.
2. Place spool of thread on spool pin "H", then pull the thread from the spool and run it over the upper arm thread guide "S" (Fig. 3).
3. Draw thread down, then insert it from right to left in slot of tension disc housing "U" (Thread Tension Knob).
4. Bring the thread up and then down over the thread take-up (check) spring "D".
5. Bring the thread downward under the thread guide tension arm "E", pass it through the slot "F" and then upward through the guide hook "G". Next, draw the thread upward and guide it, from right to left, through the eyelet "I" of the thread take-up lever.
6. Pull thread down and lead it again through the guide hook "C".
7. Draw thread into slot "K" between machine arm and face plate "L", then pull it toward the left until it slides *behind* the pin "M" (which is visible in the slot "K") and comes out below the face plate "L".
8. Pass the thread end through the needle clamp thread guide "N" and finally guide it from

left to right through the eye of the needle
"O".

9. Pull thread through needle eye, leaving about four inches of free thread hanging down from needle.

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REMOVING AND REPLACING THE LIGHT BULB

Should it ever be necessary to replace the light bulb, proceed as follows:

1. Loosen completely screw "S" (see Fig. 4) and remove face plate "L" of machine. This gives now free access to the lamp holder "P" (see Fig. 5).

2. Carefully remove old light bulb "B" (Fig. 5) by pulling it downward and out of the lamp holder "P". If necessary, spread slightly the wall portion "R" of the lamp holder to make removal of the light bulb easier.

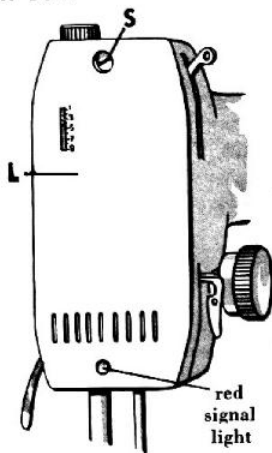


FIG. 4

3. Insert new light bulb into lamp holder and press slightly against wall portion "R" to secure firm fit of light bulb in lamp holder.
4. Replace face plate "L" and attach it to machine arm by tightening screw "S" firmly.
5. Make certain to use only NECCHI light bulbs.

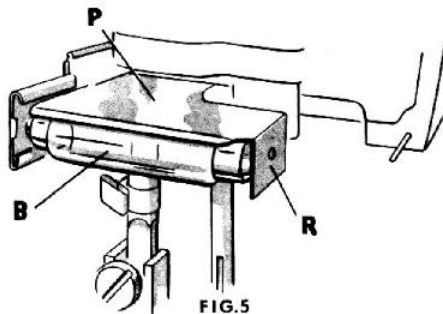


FIG. 5

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IT has always been Necchi's foremost aim to offer its customers the finest sewing machines that could be made, and no effort has ever been spared to achieve this goal. As a result, Necchi is recognized as the producer of the most advanced home sewing machines . . . machines that perform the most diversified types of work without attachments and without the need for any special operating skills.

However, in spite of these accomplishments we are always seeking new ways to make sewing even more enjoyable, and it is therefore with a great deal of pride that we announce our latest improvement, the

Wonder Wheel **NECCHI-MATIC**

With the introduction of this adapter Necchi offers, for the first time, completely automatic sewing with a cabinet machine! This ingenious new adapter, which can easily be installed on your BU machine, practically removes all limitations to your creativeness. Best of all, both of your hands are free to move the fabric at will, while the machine directs the needle accurately and automatically. You can now increase many times the variety of decorative and fancy designs that can be made with your Necchi machine, and we are certain that you will enjoy working with the wonder wheels and be delighted with the possibilities they offer you.

Working with the NECCHI-MATIC Adapter is easy, if you simply follow these instructions:

placing the discs on the Necchi-Matic

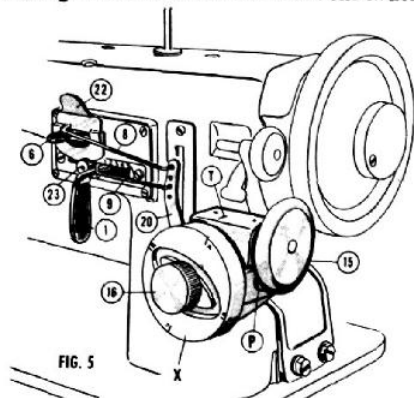


FIG. 5

The NECCHI-MATIC Adapter is furnished with a set of four plastic discs "X" (see Figs. 5 and 6). On each side of every disc is a groove of a particular shape which corresponds to a certain design that will automatically be made by the machine.

Remove the knurled knob "16" of the adapter (see Figs. 5 and 6), then place one of the discs "X" (see Fig. 6) on the center stud "19". The side of the disc which contains the design to be made, must face the machine. In placing the disc on the adapter, turn the balance wheel by hand, if necessary, and move the lever "20" (see Figs. 5 and 6) slightly back and forth until the

pin "21" (see Fig. 6) finds its way into the groove of the disc. Replace the knurled knob "16" and tighten it firmly.

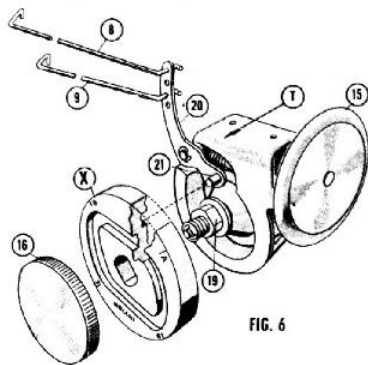


FIG. 6

how to disengage the needle positioning lever "6" from the notches

To prevent the needle positioning lever "6" (see Fig. 5) from snapping into the notches of the corresponding plate in front of the machine arm, cover the notches with a small frame "22" which is held to the machine with the aid of the index stop nut "23". This index stop nut "23" must always be in its extreme right position when the NECCHI-MATIC adapter is operated.

operating instructions

- Each disc can be used for making several ornamental designs. This depends on the manner in which the adapter is operated. As you become more experienced with the performance of the adapter, you will discover many new possibilities of increasing the variety of designs that can be made with its aid.
- The needle positioning lever "6" (Fig. 5) and the zig-zag stitch lever "1" (Fig. 5) may be operated at the same time, or separately.

In the first instance both levers are connected with the lever "20" of the adapter by means of the rods "8" and "9" (see Fig. 5).

In the second instance only one of the levers "1" and "6" is connected with the lever "20" by means of the corresponding rod, whereas the other lever is manipulated by hand.

In using these rods "8" and "9", the S-shaped ends of the rods are inserted into the corresponding holes of the lever "20" (see Fig. 5), whereas the hook-shaped (split) ends of these rods are inserted into the holes of the corresponding levers "6" and "1" (Fig. 5).

To prevent the rods "8" and "9" from coming out of the levers "6" and "1" while the adapter is in operation, the split ends of these rods can be spread slightly, if necessary, with a knife or small screw driver.

c. The features of each design depend greatly upon the proper choice of the stitch length. It has been found best to adjust the stitch length regulating lever so as to obtain a "satin stitch."

d. Sewing with the NECCHI-MATIC Adapter must always be done in the *forward* direction only.

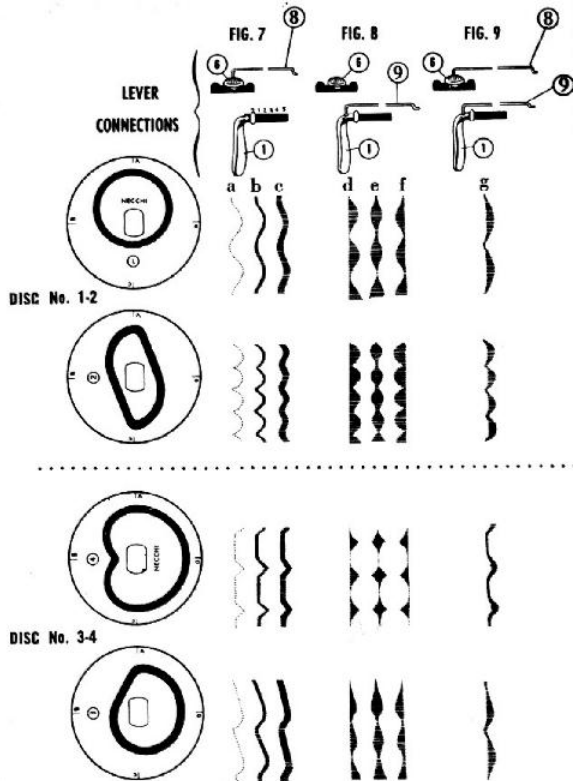
e. The illustrations Figs. 7, 8 and 9 indicate the basic designs which can be obtained with each groove of every disc by using only one of the rods "8" and "9", or by using both rods simultaneously, as explained below:

f. To obtain the designs under Fig. 7, *only* use long rod "8".

The needle positioning lever "6" (see Fig. 7) is connected by means of the long rod "8" with the uppermost hole in the lever "20" of the adapter, whereas the zig-zag stitch lever "1" is operated by hand.

In this instance the notches above the needle positioning lever "6" must be covered with the small frame "22" (see Fig. 5), as explained in paragraph 2 of this booklet.

The illustrations "a", "b" and "c" show the various widths which can be obtained with the disc grooves (1), (2), (3) and (4) at three different positions of the zig-zag stitch lever "1".



- g. To obtain the designs under Fig. 8, *only use short rod "9"*.

The needle positioning lever "6" (Fig. 8) is operated by hand, whereas the zig-zag lever "1" is connected with one of the holes in the lever "20" (Fig. 5) of the adapter. The width of the zig-zag stitch in the design will then be *larger or smaller*, depending on the hole in the lever "20" into which the short rod "9" has been inserted. The width of the stitch will be larger when the rod "9" is inserted into an upper hole of the lever "20", and smaller when inserted into a lower hole of this lever.

When working only with this shorter rod "9", the small frame "22" (see Fig. 5) must not be attached to the machine arm. In this case, the needle positioning lever "6" may be placed alternately in each of the three notches, to obtain a left-hand, a center or a right-hand stitching, respectively.

The illustrations "d", "e" and "f" show the designs which can be obtained in this instance with the disc grooves (1), (2), (3) and (4) by moving the needle positioning lever "6" to the left, the center and the right, respectively.

- h. *Use both rods "8" and "9" at the same time (fully-automatic operation)* —See Fig. 9.

In this instance the small frame "22" (see Fig. 5) must be attached to the machine, as explained previously. The longer rod "8" must be inserted into the uppermost hole of the lever "20" (see Fig. 5), whereas the shorter

rod "9" may be inserted into either of the three other holes in this lever "20". The width of the zig-zag stitch is determined by the hole in the lever "20" into which the short rod "9" has been inserted.

The illustration "g" shows the designs which can be obtained in this instance with the four disc grooves (1), (2), (3) and (4).

- i. To obtain the designs under Fig. 10, *only use long rod "8"*.

The needle positioning lever "6" (see Fig. 10) is connected by means of the long rod "8" with the uppermost hole in the lever "20" of the adapter (see Fig. 5), whereas the zig-zag stitch lever "1" is operated by hand.

In this instance the notches above the needle positioning lever "6" must be covered with the small frame "22" (see Fig. 5), as explained on page 4 of this instruction booklet.

The illustrations "a," "b" and "c" show the various widths which can be obtained with the various disc grooves at three different positions of the zig-zag stitch lever "1."

- j. To obtain the designs under Fig. 11, *only use short rod "9"*.

The needle positioning lever "6" (Fig. 11) is operated by hand, whereas the zig-zag stitch

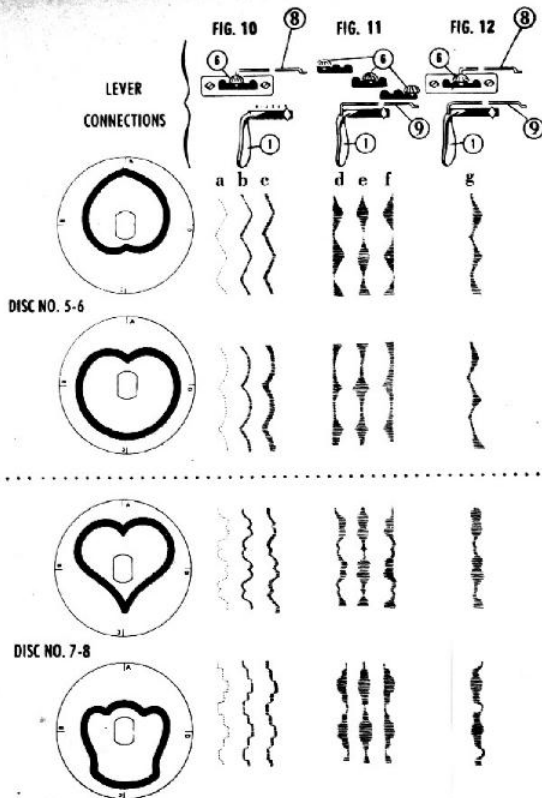
lever "1" is connected with one of the holes in the lever "20" (see Fig. 5) of the adapter. The width of the zig-zag stitch in the design will then be *larger or smaller*, depending on the hole in the lever "20" into which the short rod "9" has been inserted. The width of the stitch will be larger when the rod "9" is inserted into an upper hole of the lever "20," and smaller when inserted into a lower hole of this lever.

When working only with this shorter rod "9," the small frame "22" (see Fig. 5) must not be attached to the machine arm. In this case the needle positioning lever "6" may be placed alternately in each of the three notches, to obtain a left-hand, a center or a right-hand stitching, respectively.

The illustrations "d," "e" and "f" show the designs which can be obtained in this instance with the various disc grooves by moving the needle positioning lever "6" to the left, the center and the right, respectively.

- k. *Fully-automatic operation is obtained by using both rods "8" and "9" at the same time* — See Fig. 12.

In this instance the small frame "22" (See Fig. 5) must be attached to the machine, as explained previously. The longer rod "8" must be inserted into the uppermost hole of the lever "20" (see Fig. 5), whereas the shorter rod "9" may be inserted into either



of the three other holes in this lever "20." The *width* of the zig-zag stitch is determined by the hole in the lever "20" into which the short rod "9" has been inserted.

The illustration "g" shows the designs which can be obtained in this instance with the disc grooves of these discs Nos. 5-6 and 7-8.

- l. To obtain fancy designs (eventually in various colors), it is also possible to combine each of the simple basic designs described in the preceding paragraphs, with other designs made with the aid of one or several discs.

When making such combined designs, it is essential to line up the fabric by hand so that these designs will match each other. For more complicated designs, it is advisable to use the transparent presser foot No. A 24/10 which can be purchased from an authorized NECCHI dealer.

- m. Ornamental designs of various kinds can also be obtained at will by using only one of the two aforementioned rods ("8" and "9") and by operating by hand that lever ("1" or "6") which is not connected with the lever "20" of the NECCHI-MATIC.

To guide you in this instance, every disc has four position marks (timing marks) A, B, C and D on each side, which are spaced at 90 degrees from each other. Another position

mark (timing mark) "T" (see Figs. 5 and 6) has been placed on the frame of the adapter.

The coincidence of any of the timing marks (A, B, C or D) on the disc with the timing mark (T) on the adapter indicates that the desired cycle of the design (90, 180, 270 or 360 degrees) has been completed and that another cycle is about to begin. When the selected timing mark on the disc lines up with that on the adapter (T), you should cease sewing by stopping the balance wheel of the machine by hand (so that the needle is out of the fabric), then move by hand that lever ("1" or "6") which is not connected with the adapter, and resume sewing until the timing marks on disc and adapter line up again. In this manner a practically unlimited variety of ornamental designs can be obtained.

breaking of thread during sewing

If, during the aforementioned procedure, thread breaking occurs, it is advisable to unravel all stitches that were made since the end of the preceding design (cycle) and to start the new cycle all over again. It is thereby necessary to bring the rubber wheel "15" (see Fig. 5) out of contact with the balance wheel of the machine and to turn the wheel "15" by hand until the timing mark "A" on the disc coincides with the timing mark "T" (see Fig. 5) on the adapter.

sewing very thin fabrics

When sewing very thin fabrics, it is expedient to place a piece of thin paper underneath the fabric which should then be removed after the work is completed. Thus sewing is made easier.

filling the empty bobbin

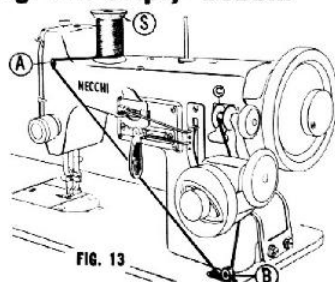


FIG. 13

The NECCHI-MATIC Adapter does not complicate the filling of the bobbin. To wind the bobbin, proceed as follows (see Fig. 13): Draw the thread from the spool "S" through the thread guide "A" on the arm of the machine, from there guide it through the tension device "B" on the bed plate, then lead it along the rear portion of the adapter and finally wind it several times around the empty bobbin. The filling of the bobbin can now be performed in the usual manner.

maintenance of the NECCHI-MATIC

The adapter should be cleaned from time to time of lint and dirt, and lubricated with regular NECCHI oil. The oil holes on the adapter are indicated in red. Prevent oil from getting on the rubber ring of the pulley. Wipe off thoroughly all oil that may have dropped on this rubber ring.

SLIDE PLATE FOR CIRCULAR SEWING

(See illustrations on next page)

The slide plate of this machine is provided with three holes "H" (see Fig. 1) which make it possible to perform *circular sewing*. Illustration Fig. 3 shows the type of work done by circular sewing. Illustration Fig. 2 shows a cross-section through the fabric to be sewn, the slide plate and a small rubber stopper which is included in the accessory box of the machine.

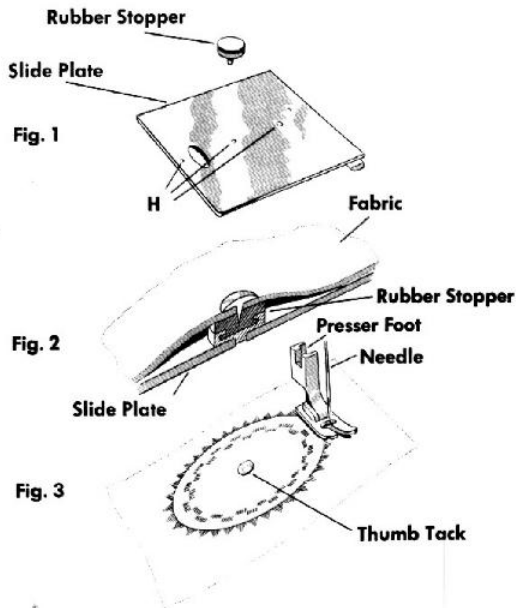
To do circular sewing, proceed as follows:

Insert the small rubber stopper into one of the three holes "H" of the slide plate. The choice of the hole "H" depends on the diameter of the circle to be sewn. The farther away the rubber stopper is from the needle, the larger will be the circle sewn.

Place the fabric under the presser foot, then take an ordinary thumb tack and push it, through the center of the circle to be sewn, into the rubber stopper (as indicated in Figs. 2 and 3).

While sewing keep a finger placed on the thumb tack so that the fabric, revolving around the center point of the design, does not slip or become detached (which may cause irregularities in the embroidered design).

Circular sewing should be done only with materials possessing a certain consistency such as corduroy, stiff woollens, leather, etc. Lighter materials, for the purpose of circular sewing, should be placed in an ordinary embroidery hoop.



INSTRUCTIONS FOR THE USE OF THE NECCHI AUTOMATIC NEEDLE-THREADER

The needle-threader is made up of:

- a body A with a groove B in the upper part;
- a metallic guide C;
- a hook D.

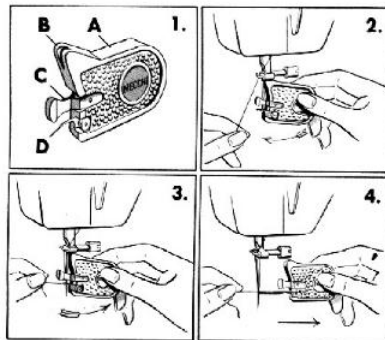
The needle-threader is used as follows:

take the needle-threader between the thumb and the forefinger of the right and place it on the axis of the needle so that it touches the bottom of the needle clamp, the needle fits into the groove B and the metallic guide C slips over the needle; then rotate the needle-threader on the axis of the needle until the hook passes through the eye of the needle;

with the thumb and forefinger of the left hand, pass the thread under the hook and hold it taut (Fig. 3);

gently move the needle-threader upwards (see arrow Fig. 3) and then away from the needle clamp; the hook D will draw the thread through the eye of the needle.

Each automatic needle-threader is delivered with a spare hook which can be easily mounted in case of breakage of the original.



DOUBLE NEEDLE SEWING WITH THE BU MIRA MACHINE

The Double Needle makes it possible to sew on the BU MIRA with two threads of the same color, or of different colors, at the same time, thereby increasing the variety and attractiveness of decorative seams that can be made with this sewing machine.

To sew with the Double Needle, the machine must be prepared as follows:

- 1) Insert Double Needle (Fig. 1-B) in the same manner as the regular single needle. Bring needle bar to its highest position by turning balance wheel toward you, then loosen the needle clamp screw, remove single needle and insert the Double Needle (with flat side of shank toward the right) into groove of needle bar. Push Double Needle up into clamp, as far as it will go, then tighten needle clamp screw firmly. Do not bend needles when inserting them into needle bar.

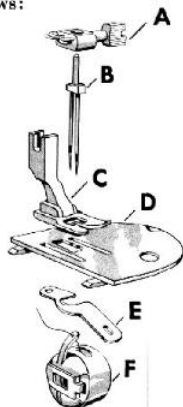


Fig. 1

- 2) Substitute regular hinged presser foot with hinged double needle presser foot (Fig. 1-C).

- 3) Substitute regular needle plate with needle plate for double needle (Fig. 1-D).

The above parts are standard equipment with all BU MIRA machines, and can be found in the accessory box.

- 4) When sewing with the Double Needle, the lower thread, after having passed below the tension spring of the bobbin case, must go through the hole in the positioning finger of the bobbin case (Fig. 1-F).

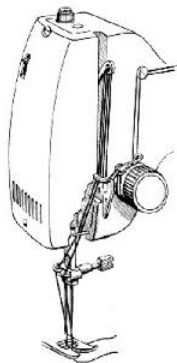


Fig. 2

The needle clamp (Fig. 1-A), the race cover plate (Fig. 1-E) and the bobbin case (Fig. 1-F) can also be used for sewing with a single needle only.

- 5) For Double Needle sewing, the upper and lower thread tensions must be adjusted very carefully, as indicated in our instruction booklet.

If the stitching is imperfect, even after careful adjustment of the thread tensions,

the rear needle should be pushed slightly with a finger from left to right.

- 6) When sewing with the Double Needle, the machine must be threaded as illustrated in Fig. 2.

CAUTION: When sewing with the Double Needle, never use the largest width of the zig-zag stitch. Also, never move the stitch length lever to the position that gives the longest stitch. If it is necessary to turn the material, make sure, before doing so, that the two needles are completely out of the fabric.

Sewing with the Double Needle can be performed without the aid of the NECCHI-MATIC (regular sewing) and in connection with the NECCHI-MATIC (automatic sewing). Some of the decorative stitches made by means of regular and automatic sewing are shown on the following pages. Instructions are also given pertaining to the manipulation of the various levers in order to obtain these decorative stitches. *Threads to be used for Sewing with the Double Needle:*

For regular sewing of decorative stitches as well as for sewing of decorative stitches with the aid of the NECCHI-MATIC, embroidery thread No. 50 should be used for the upper and the lower threads.

For certain decorative stitches, embroidery thread No. 50 should be used for the upper thread and pearl cotton No. 8 for the lower thread. In these instances the desired decorative seam appears on the underside of the fabric and, considering this fact, the material to be sewn should be placed on the machine accordingly.

Types of Decorative Stitches Obtainable with the Double Needle:

In the following are illustrated some of the decorative stitches which can be made with the aid of the Double Needle. It must, of course, be

realized that the actual work, being made on fabric and with differently colored threads, will represent the beauty of these decorative stitches much more vividly than the simple black-white illustrations shown below:

REGULAR SEWING

Use embroidery thread No. 50 for upper and lower threads.

Fig. 3



Machine Setting:

Needle Position Lever:

In center notch.

Zig-Zag Stitch Lever:

Between "2" and "3".

Stitch Length Lever:

Set at "3".

Fig. 4



Needle Position Lever:

Move rhythmically back and forth between right and left notch.

Zig-Zag Stitch Lever:

Set at "2".

Stitch Length Lever:

Set for "Satin Stitch".

Fig. 5



Needle Position Lever:

In center notch.

Zig-Zag Stitch Lever:

Move slowly back and forth from left to right.

Stitch Length Lever:

Set for "Satin Stitch".

For the following stitches, use embroidery thread No. 50 for upper threads and pearl cotton No. 8 for lower thread. The tension of the upper threads should be very tight, and that of the lower (bobbin) thread be very loose.

The decorative stitches Figs. 6, 7 and 8 will appear on the underside of the fabric. Considering this fact, the material to be sewn should be placed on the machine accordingly.

Fig. 6



Machine Setting:

Needle Position Lever:

In center notch.

Zig-Zag Stitch Lever:

Set at "5".

Stitch Length Lever:

Set at "4".

Fig. 7



Needle Position Lever:

In center notch.

Zig-Zag Stitch Lever:

Set at "5".

Stitch Length Lever:

Set slightly below "1" (about $\frac{3}{4}$).

Fig. 8



Needle Position Lever:

In center notch.

Zig-Zag Stitch Lever:

Set at "5".

Stitch Length Lever:

Set at "1".

SEWING WITH DOUBLE NEEDLE AND NECCHI-MATIC

Use embroidery thread No. 50 for upper and lower threads.

Machine Setting:

Needle Position Lever:

Operated automatically (connected by means of long rod with NECCHI-MATIC).

Zig-Zag Stitch Lever:

Set between "1" and "2".

Stitch Length Lever:

Set for "Satin Stitch".

Fig. 9



Design with groove "1" of
disc No. 1-2.

Fig. 10



Design with groove "2" of
disc No. 1-2.

Fig. 11



Design with groove "3" of
disc No. 3-4.

Fig. 12



Design with groove "4" of
disc No. 3-4.

