

INSTRUCTION

LX-SP SERIES

Industrial Sewing Machines

LX5801SP

First published : April 2006

No. 060035

KANSAI
SPECIAL®

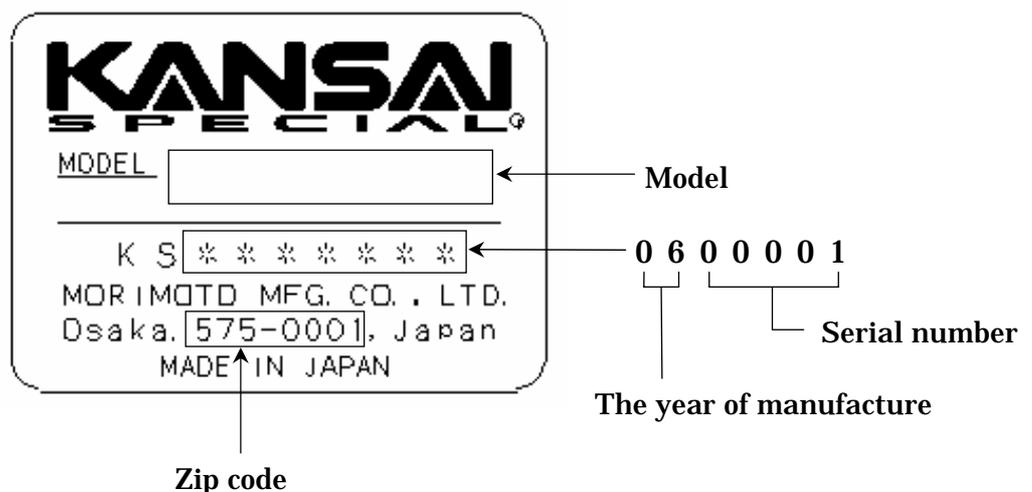
INTRODUCTION

Thank you for your purchasing Kansai Special's LX-SP Series.

Read and study this instruction manual carefully before beginning any procedures and save it for later use.

1. This instruction manual describes setting-up and adjustment procedures for this machine.
2. Before operating the machine, make sure the pulley cover, safety cover, etc. are secured.
3. Before adjusting, cleaning, threading the machine or replacing the needle, be sure to turn off the power.
4. Please do not start the machine with no oil in the reservoir.
5. Refer to the parts list as well as this instruction manual before maintenance.
6. The contents described in this instruction manual are subject to change without notice.

Indication of serial number

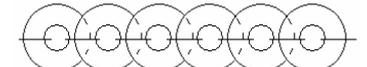
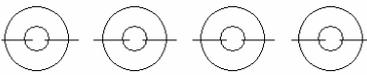


LX-SP series

CONTENTS

1. SPECIFICATION	1
2. SETTING UP THE MOTOR	
2-1 Installing the synchronizer	1
2-2 Adjusting the needle stop position	1
2-3 Max. machine speed	1
3. SETTING UP THE SEQUIN DEVICE	
3-1 Installing the sequin device	2
3-2 Installing the sequin reel	2
3-3 Inserting the sequin tape	3
3-4 Connecting the electric cord	4
3-5 Checking the sequin feed timing	4
4. ADJUSTING THE SEQUIN DEVICE	
4-1 Adjusting the sequin cutting position	5
4-2 Adjusting the sequin hole position against the needle	7
4-3 Adjusting the height of sequin device	8
4-4 Adjusting the sequin feed timing	8
4-5 Changing the sequin guide	8
5. SETTING UP & OPERATING THE CONTROL BOX	
5-1 Description	9
5-2 Connecting the power wire	9
5-3 Functions of the control box	10
5-4 Applying the new settings	13

【1】 SPECIFICATION

Machine model	LX5801 (1 needle, double chain stitch)
Machine motor	Servo Motor
Max. machine speed	600rpm
Standard needle type	UY128GAS #14
Sequin size	5mm (Factory Setting) 3mm (Including optional presser foot & guide) 7mm (Including optional presser foot & guide)
Sewing pattern	<p>1 sequin on every stitches </p> <p>1 sequin on 2 stitches </p> <p>1 sequin on 10 stitches (max)</p>
Sequin reel size	A sequin reel of 180 mm in diameter
Power supply for sequin device	AC220V Single-phase

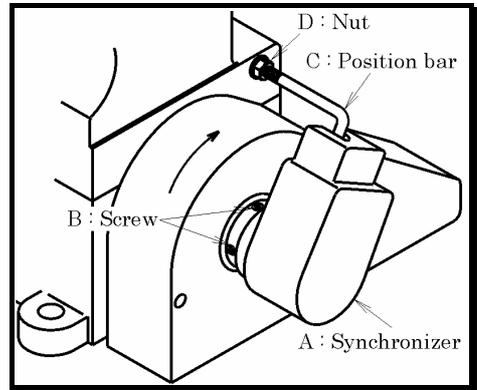
【2】 SETTING UP THE MOTOR

2-1 Installing the synchronizer

Install the synchronizer A to the machine pulley and tighten the screws B temporarily. (Fig.1)

Set the position bar C to the guide groove of the synchronizer A and tighten the nut D. (Fig.1)

(Fig.1)

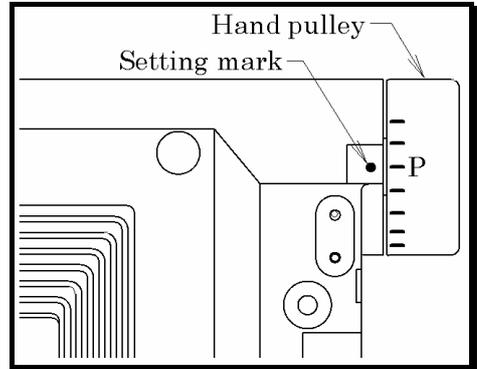


2-2 Adjusting the needle stop position

The needle must be at its highest position

In order to align a mark "P" of hand pulley with the setting mark, adjust the synchronizer A after loosening the screws B. (Fig.1,2)

(Fig.2)



2-3 Max. machine speed

600 r p m

In case of the sequin size at 7mm, reduce the max. machine speed to 500 rpm.

【3】 SETTING UP THE SEQUIN DEVICE

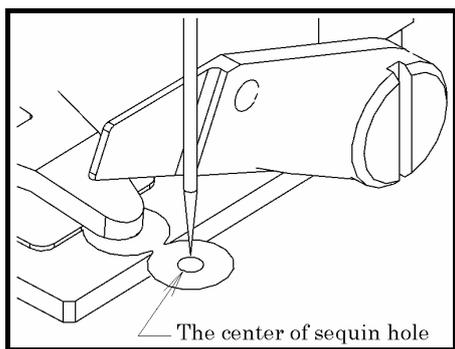
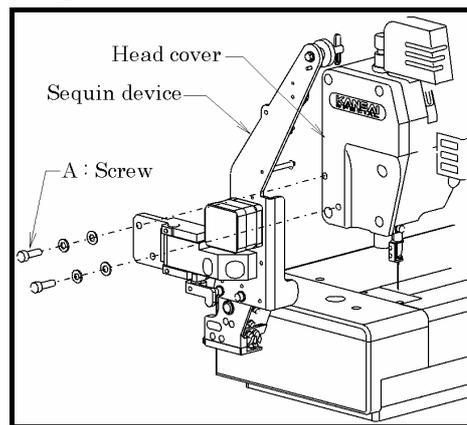
3-1 Installing the sequin device

Install the sequin device to the head cover with screws A. (Fig.3)

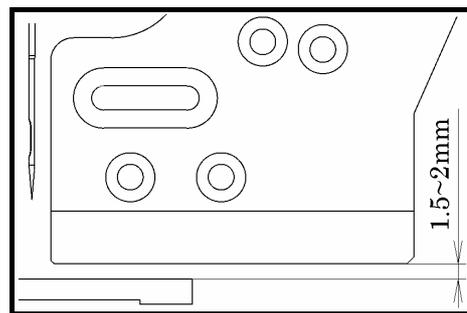
Tighten the screws A after checking the followings.

1. The needle drops into the center of sequin hole. (Fig.4)
2. The clearance range between the bottom surface of sequin device and the top surface of the needle plate should be 1.5~2.0mm. And then, make sure it is paralleled. (Fig.5)

(Fig.3)



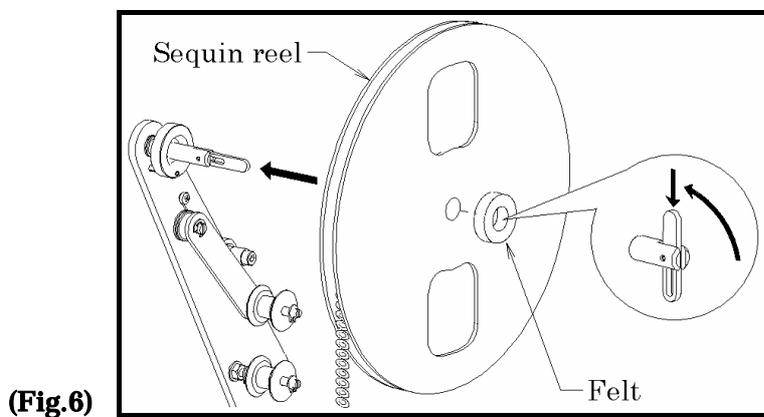
(Fig.4)



(Fig.5)

3-2 Installing the sequin reel

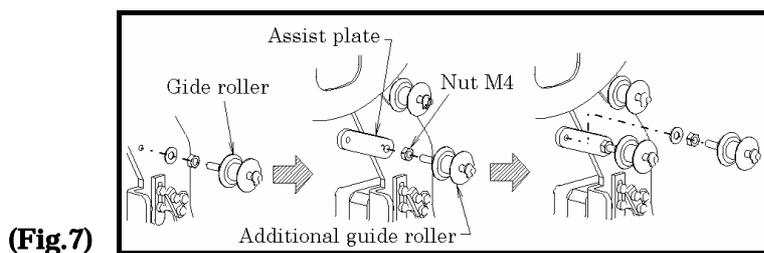
Set the sequin reel on the device as the following figure. (Fig.6)



(Fig.6)

In case of setting the reverse rolled reel, the additional guide roller is needed as the above figure. (Fig.7)

Take away the original guide roller, and then assemble the assist plate and the additional guide roller to the device with a nut "M4." Lastly, assemble the original guide roller to the assist plate. (Fig.7)



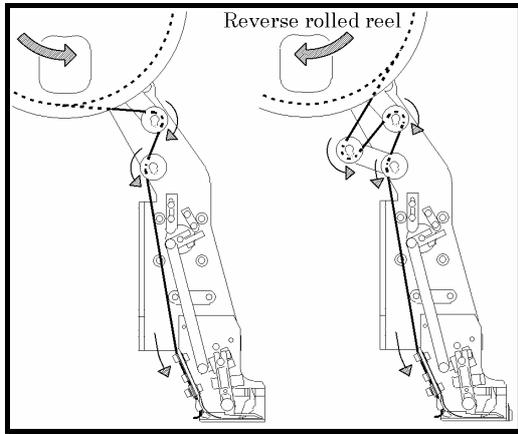
(Fig.7)

3-3 Inserting the sequin tape

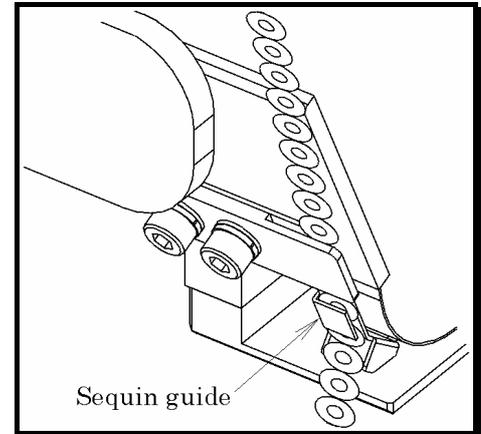
Insert the sequin tape to the sequin guide. Refer to the following figure. (Fig.9)

In case of the reverse rolled reel, threading way is different. Refer to the following figure. (Fig.8)

(Fig.8)

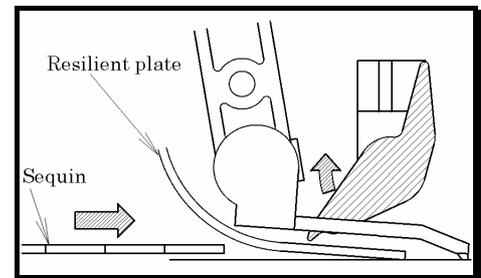


(Fig.9)



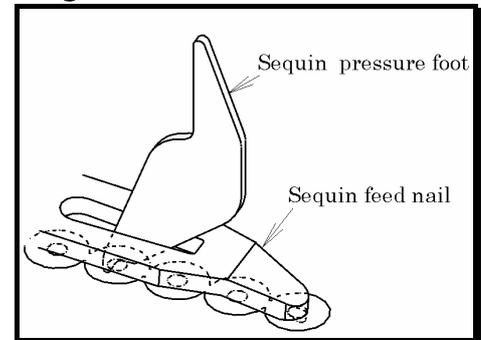
Thread the sequin tape under the resilient plate, moving the sequin pressure foot up. (Fig.10)

(Fig.10)



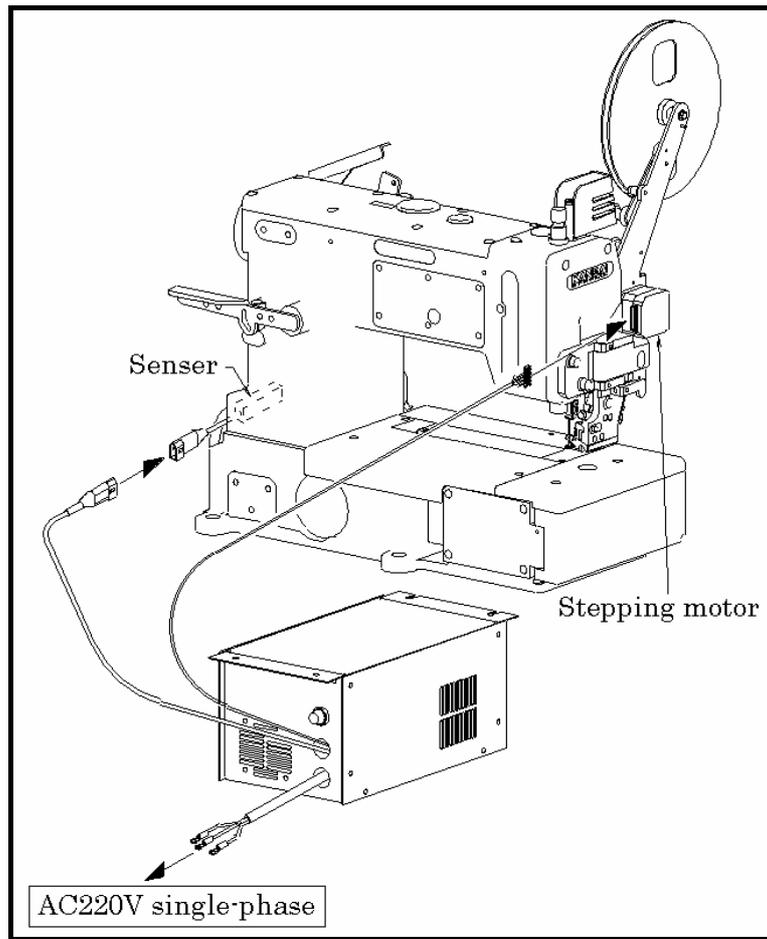
The top edge of the sequin pressure foot and the sequin feed nail shall be positioned on the center of the sequin hole. (Fig.11)

(Fig.11)



3-4 Connecting the electric cord

Connect the electric cord as the following figure. (Fig.12)



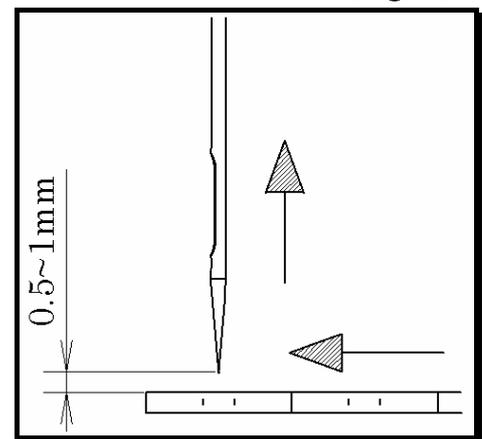
(Fig.12)

3-5 Checking the sequin feed timing

Proper timing is the moment which a sequin starts to be fed, when the point of needle reaches 0.5~1.0mm above from the sequin surface on its upstroke. (Fig.13)

Turn on the power, and check the sequin feed timing by turning the hand pulley slowly.

If the feed timing is incorrect, need to be adjusted. Refer to "4-4 Adjusting the sequin feed timing" on page. 8.



(Fig.13)

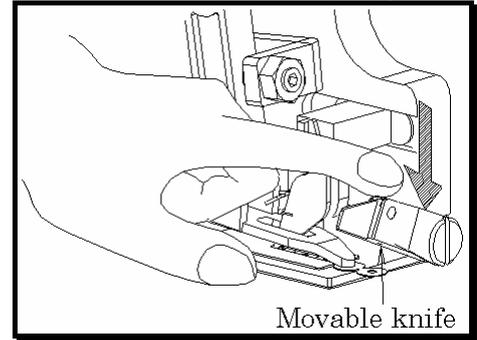
【4】 ADJUSTING THE SEQUIN DEVICE

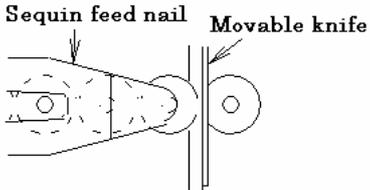
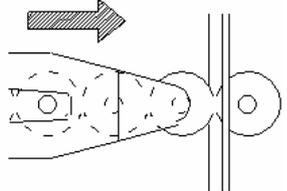
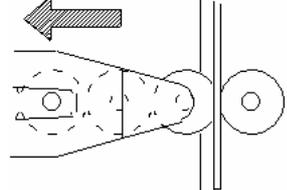
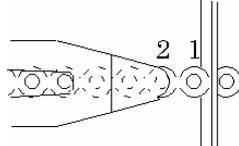
4-1 Adjusting the sequin cutting position

Feed a sequin by pushing the feeding bar. A reference figure is on the page. 6. (Fig.16)

Cut a sequin by pushing down the movable knife as the figure on the right. (Fig.14)

(Fig.14)



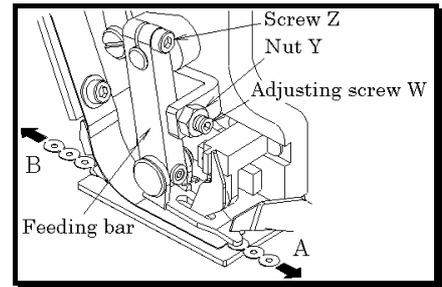
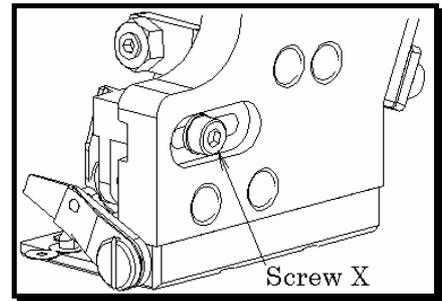
 <p>Correct cutting position</p> <p>No necessary to adjust.</p>	 <p>Sequin feed nail Movable knife</p>
 <p>Wrong cutting position (a)</p> <p>Move forward the feeding nail toward the movable knife.</p>	
 <p>Wrong cutting position (b)</p> <p>Move backward the feeding nail in the opposite direction against the movable knife.</p>	
<p>In case of 3mm sequin, adjust the feeding nail position at the second sequin from the movable knife.</p>	

In case of wrong cutting position, adjust it with the following procedures.



1. Loosen the screw X on the sequin pressure foot bracket. Refer to the right figure. (Fig.15)
2. Loosen the screw Z on the feeding bar to release itself freely from the shaft. (Fig.16)
3. In case of wrong cutting position (a), loosen the nut Y. Then, adjust the cutting position by turning up the adjusting screw W, while pushing the feeding bar to the direction "A" as the following figure. (Fig.16)
4. In case of wrong cutting position (b), loosen the nut Y. Then, adjust the cutting position by turning down the adjusting screw W, while pulling the sequin tape to the direction "B" as the following figure. (Fig.16)
5. After adjustment, tighten the nut Y. Lastly, tighten the screw Z on the feeding bar, while pressing the feeding bar against the adjusting screw W. (Fig.16)

(Fig.15)

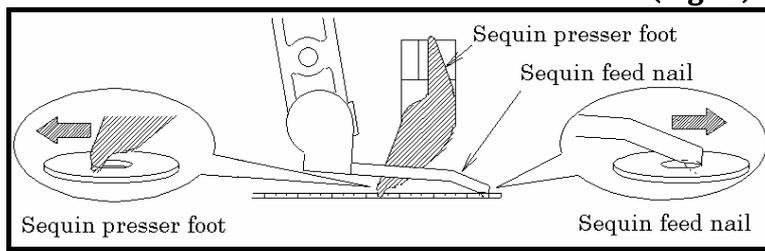


(Fig.16)

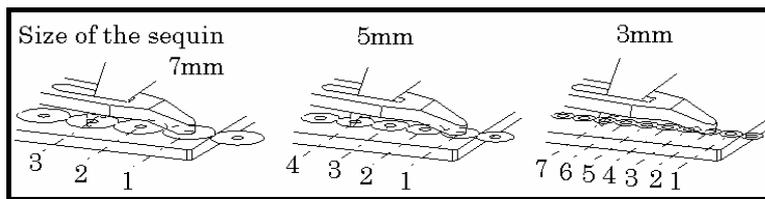
Wrong cutting	Adjusting screw	Position of the feeding nail
<p>Too Short</p>		
<p>Too Long</p>		

6. When the top edge of the sequin presser foot is positioned on the center of the sequin hole, and also, the top edge of the sequin feed nail is positioned on the center of the another sequin hole, tighten the screw on the bracket of the sequin presser foot.(Fig.17)

(Fig.17)



The position is different depending on the size of the sequin. (Fig.18)



(Fig.18)

7. Check the sequin cutting position after test cut. Adjust it until showing the correct cutting position with repeating above procedures.

4-2 Adjusting the sequin hole position against the needle

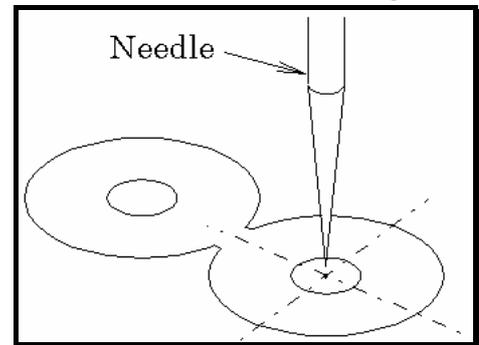
Note: This adjustment is necessary only for:

If the needle drop position is incorrect into the sequin hole, after followed “4-1 Adjusting the sequin cutting position.”

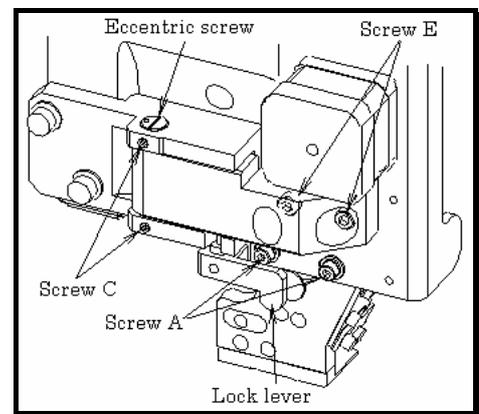
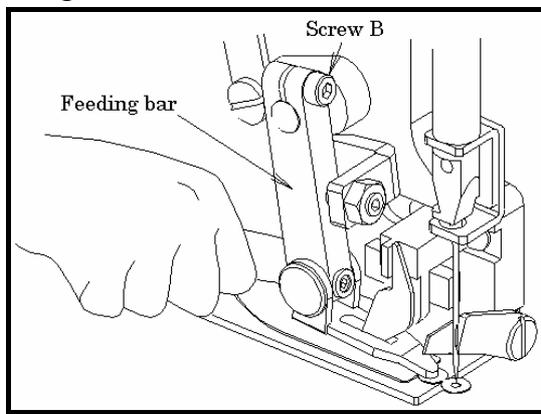
Adjusting the front-back position

1. Loosen the screw A and B. (Fig.21)
2. Adjust the needle drop position into the center of the sequin hole, while pressing the feeding bar by hand. (Fig.19,20)
3. After adjusting the position, fasten the screw A.(Fig.21)
4. While keeping the feeding bar position by pressing, tighten the screw B. (Fig.20)

(Fig.19)



(Fig.20)

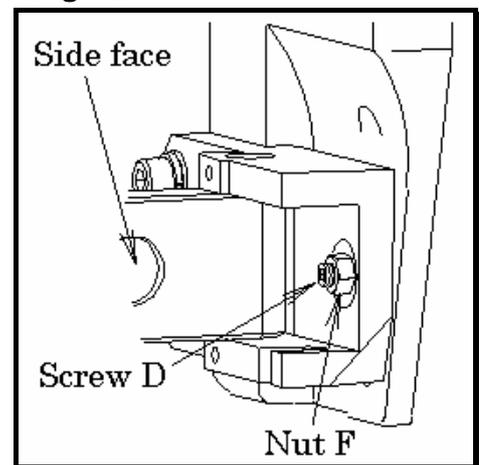


(Fig.21)

Adjusting the left-right position

1. Loosen the screw C after opening the lock lever. (Fig.21)
2. Adjust the needle position to be dropped into the center of sequin hole by turning round the eccentric screw by a flathead screwdriver. When the sequin hole is positioned at the left side against the needle, adjust it after tightening the screw D. (Fig.22)
3. Tighten the screw C after adjusting the position.(Fig.21)
4. Tighten the nut F after the screw D touches onto the side face at the correct needle drop position into the center of the sequin hole. (Fig.22)

(Fig.22)

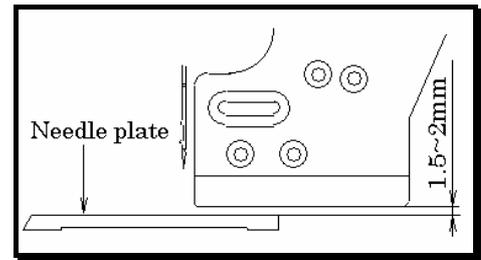


Check back once more to “Adjusting front-back position”, after finishing this adjustment.

4-3 Adjusting the height of sequin device

Height will be changed depending on the fabric weight.

1. Loosen screw E on the figure. (Fig.21)
2. Move the sequin device up or down.
3. Clearance range between the bottom surface of sequin device and the top surface of the needle plate should be 1.5~2.0mm. (Fig.23)

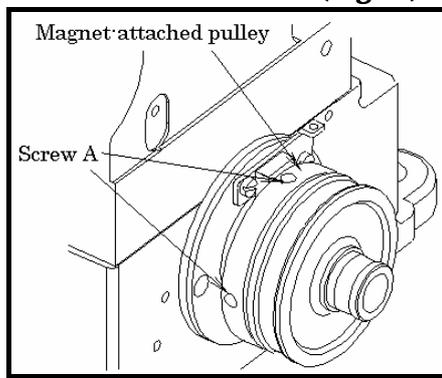


(Fig.23)

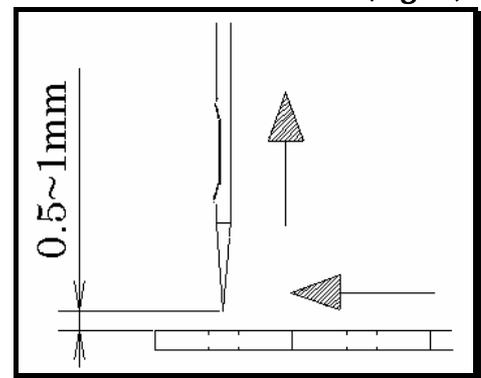
4-4 Adjusting the sequin feed timing

Proper timing is the moment which a sequin starts to be fed, when the point of needle reaches 0.5~1.0 mm above from the sequin surface on its upstroke. (Fig.25)

Turn on the power, and check the sequin feed timing by turning the hand pulley slowly. Loosen screws A, and adjust the synchronization by turning round the magnet-attached pulley. (Fig.24)



(Fig.24)



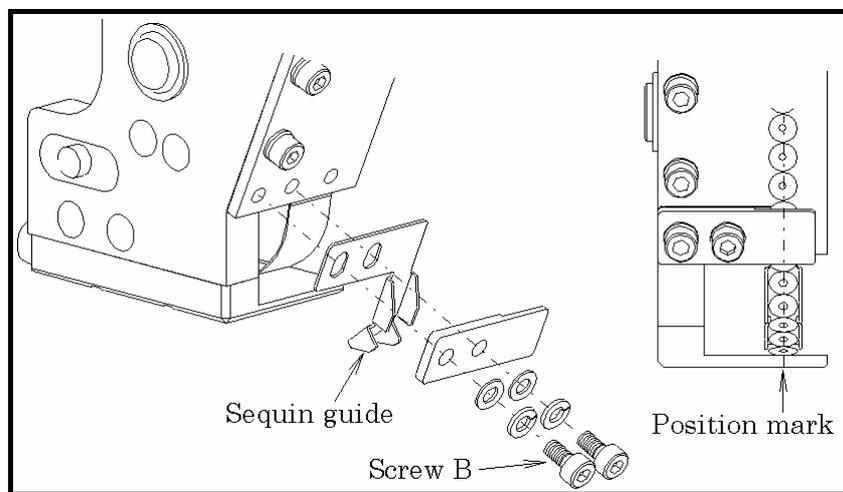
(Fig.25)

4-5 Changing the sequin guide

The sequin guide size shall be fit sequin size itself. (Fig.26)

1. Take away screws, and change the sequin guide.
2. Insert the sequin tape into a sequin guide, and then adjust the guide position that the center of sequin hole and position mark on the sequin device are placed on collinear position.
3. When the sequin size changes, the sequin cutting position and the needle drop down position will be also change. In case of its situations, please check back to "4-1 & 4-2."

Please also change the presser foot for same-sized sequin.



(Fig.26)

【5】 SETTING UP & OPERATING THE CONTROL BOX

5-1 Description

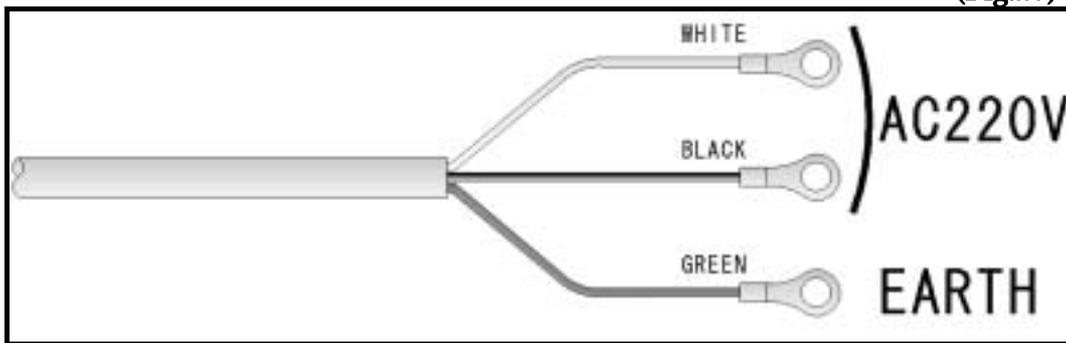
The sequin pitch (feeding amount) and skip pattern (sequin interval) are both changeable by operation panel setting and machine adjustment.

Max. speed 600 rpm is available, and insures stable operation for the sequin feed.

5-2 Connecting the power wire

Power wires extend from the control box as the following figure.
Connect both a white and a black wire to AC220V power supply.
Connect a green wire (earth wire) to the ground.

(Fig.27)



<Caution 1.>

The control box can be used for only single-phase AC220V power type.

The different power use certainly causes machine failure.

<Caution 2.>

The earth wire must be connected to the ground.

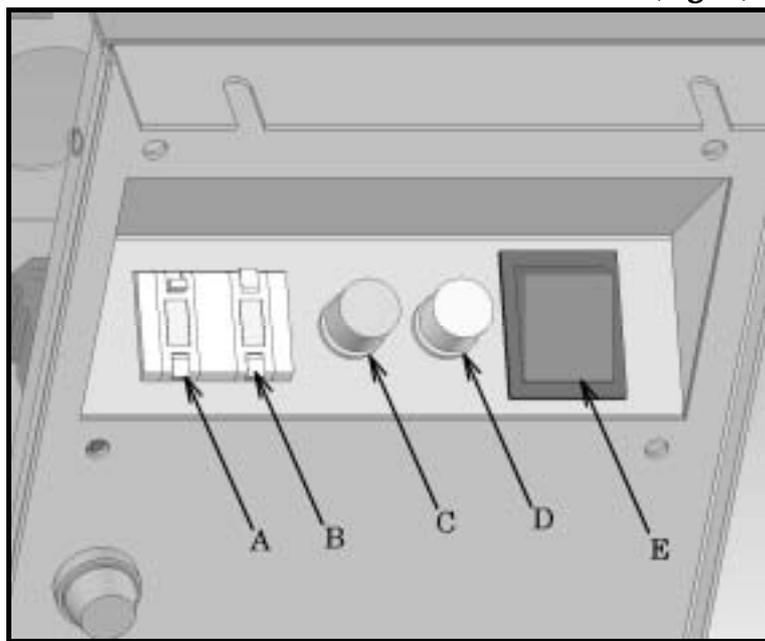
<Caution 3.>

An unstable electric power supply may cause the machine malfunctions.

To avoid this problem, strongly recommend to use the Constant Frequency Voltage Power Supply (CVFT), and the Uninterruptible Power Supply (UPS).

5-3 Functions of the control box

(Fig.28)



- A ; Size Setting Rotary switch (Left)
Sequin size can be determined by this switch, and then feeding amount is also changed.
3mm, 5mm, and 7mm, sequin size, are available.
Switch assignment is the following;

0	No Data
1	No Data
2	No Data
3	3mm
4	No Data
5	5mm
6	No Data
7	7mm
8	No Data
9	No Data

Please select 3, 5, or 7, due to no program in the other slots.

Caution 1.

Please remember to adjust the sequin feed timing again, after the sequin size is changed.

Caution 2.

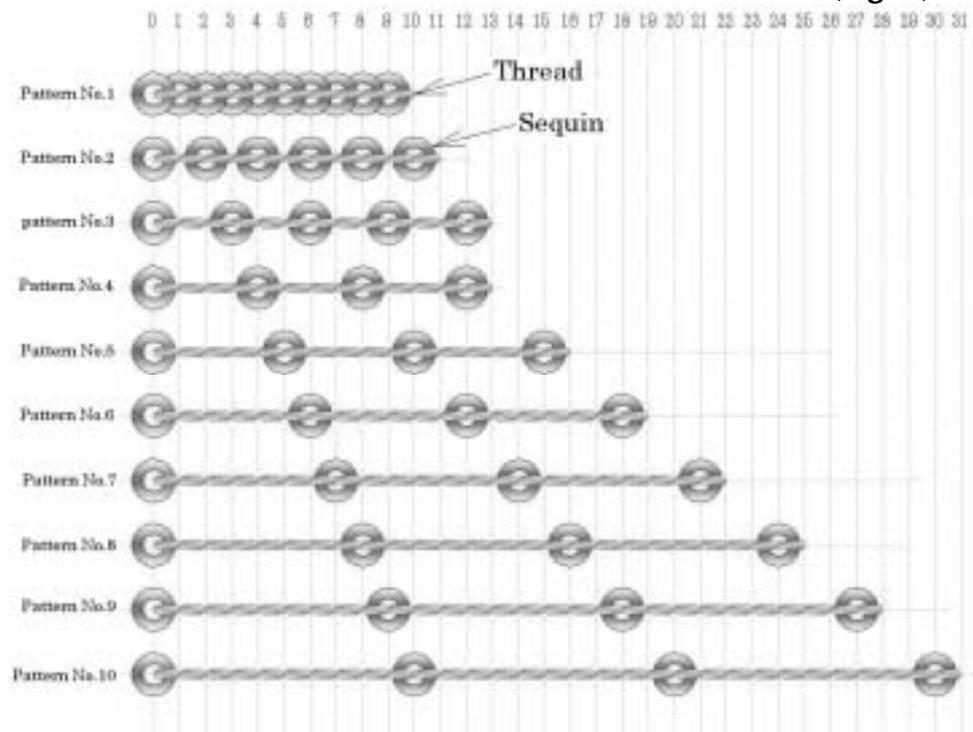
To change the sequin size and skip pattern, choose the size and skip and then always press "Set" while machine operation stops.
Please remember that size and skip setting cannot be changed while the operation.

B ; Pattern Setting Rotary switch (Right)
Switch assignment is the following;

Pattern No.	Switch No.	Skip pattern
1	0	Continuous sequins
2	1	1 sequin on every 2 stitches
3	2	1 sequin on every 3 stitches
4	3	1 sequin on every 4 stitches
5	4	1 sequin on every 5 stitches
6	5	1 sequin on every 6 stitches
7	6	1 sequin on every 7 stitches
8	7	1 sequin on every 8 stitches
9	8	1 sequin on every 9 stitches
10	9	1 sequin on every 10 stitches

The skip pattern is illustrated in the following figure;

(Fig.29)



Caution 1.

The first stitch always shows up with the first sequin right after changing the pattern.

Caution 2.

To change the sequin size and skip, choose the size and skip and then always press "Set" while machine operation stops.

Please remember that size and skip setting cannot be changed while the operation.

C ; Set switch Yellow push button.
To apply the new settings, press “Set” after change the sequin size or pattern.

Caution

A “Set” switch does not function while an operation.

To change the sequin size or pattern, press “Set” switch while a machine has stopped.

D ; One shot switch White push button.
One sequin is fed from the sequin device by pressing “one shot.”

Caution

This switch functions while a machine does not operated.

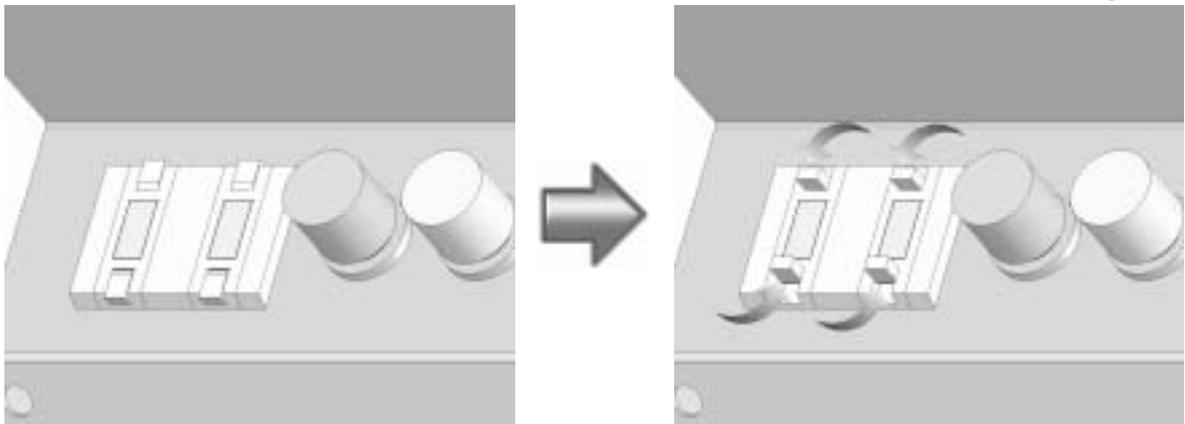
E ; Power switch A green change-over switch
Turning on the switch, Fun motor and Pulse motor is powered.

5-4 Applying the new settings

Applying the rotary switch (Fig.30)

Press the sequin size and pattern switch after making a push-tab switch stand as the following figures. To avoid touching the switch accidentally, please face down the push-tab switch after changing the settings

(Fig.30)

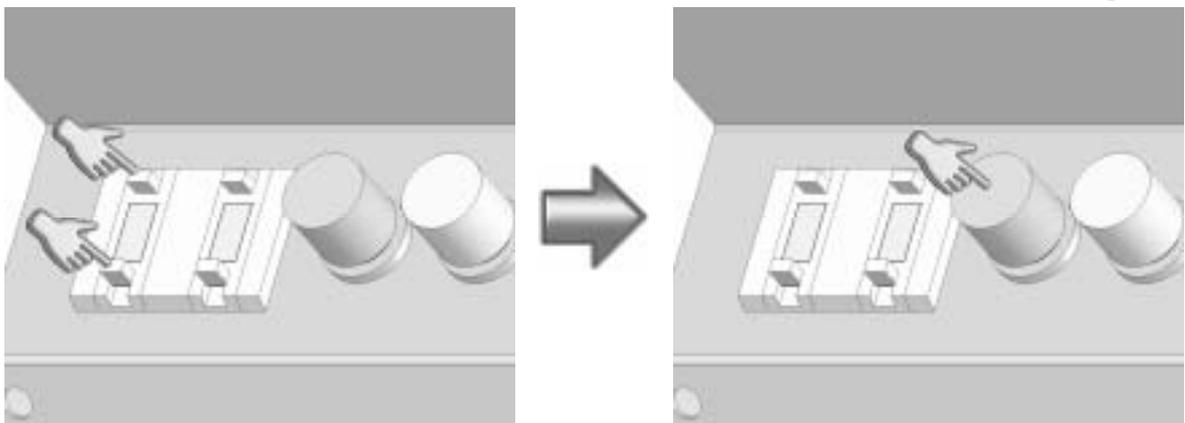


The upper push-tab switch: +1 with each pressing.
The lower push-tab switch: -1 with each pressing.

Size setting (Fig.31)

While the operation stops, press "Set" to apply the changing after changing the sequin size. The new setting is completely set right after pressing "Set."

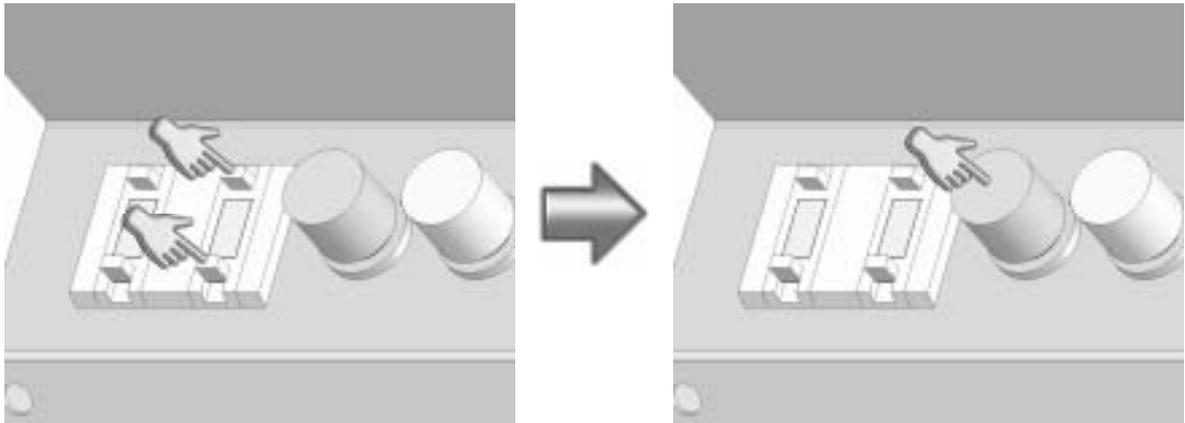
(Fig.31)



Pattern setting (Fig.32)

While the operation stops, press “Set” to apply the changing after changing the sequin size. The new setting is completely set right after pressing “Set.”

(Fig.32)

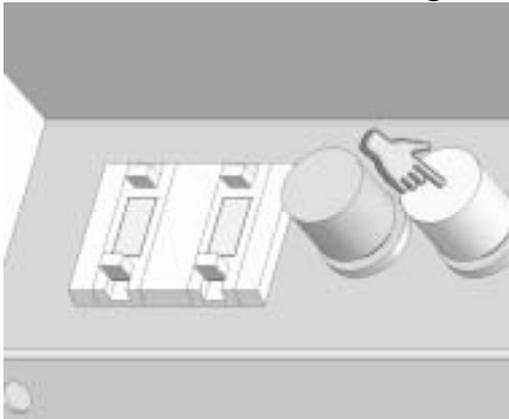


A “Set” bottom can be used to change both changing: size and pattern at the same time.

One shot switch (Fig.33)

Press “one shot” while the operation stops, then one sequin is fed from the sequin device. This function is useful to check the setting accuracy when the sequin size or pattern is changed.

(Fig.33)



Caution

Remember to adjust the sequin feed timing again, when the sequin size is changed. In case of 3mm sequin as the following figure, the feeding amount must be needed at least 1.5mm plus needle radius. (1.5mm is the sequin radius.)

(Fig.34)

